111522

TCL Pesticides and PCBs

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION – PESTICIDES AND PCBs
ELIZABETHTOWN LANDFILL

MATRIX: SEDIMENT
UNITS: ug/kg

SAMPLE POINT	4,4'-DDD	Qual	4,4'-DDE	Qual	4,4'-DDT	Qual	Aldrin	Qual	Aroclor-1016	Qual
870/B/0SEDP1/1A	1.4	J	1.1	J	1.4	J	1.75	U	34	U
870/B/0SEDP1/FD	3.5	U	1	J	0.89	J	1.8	U	35	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION – PESTICIDES AND PCBs
ELIZABETHTOWN LANDFILL

MATRIX: SEDIMENT
UNITS: ug/kg

SAMPLE POINT	Aroclor-1221	Qual	Aroclor-1232	Qual	Aroclor-1242	Qual	Aroclor-1248	Qual	Aroclor-1254	Qual
870/B/0SEDP1/1A	70	U	34	U	34	U	34	U	34	U
870/B/0SEDP1/FD	70	U	35	U	35	U	35	U	35	U

QUALIFIERS:
- A - Acceptable (Quantitative) Data
- J - Estimated (Semiquantitative) Data
- K - Value Biased High (Semiquantitative) Data
- L - Value Biased Low (Semiquantitative) Data
- B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
- UJ - Not Detected/Estimated Data
- U - Not Detected/Quantitative Data
- UL - Not Detected/Biased Low
- N - Tentative Identification
- R - Unusable Data
- Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION – PESTICIDES AND PCBs
ELIZABETHTOWN LANDFILL

MATRIX: SEDIMENT
UNITS: ug/kg

SAMPLE POINT	Aroclor-1260	Qual	Dieldrin	Qual	Endosulfan I	Qual	Endosulfan II	Qual	Endosulfan Sulfate	Qual
870/B/0SEDP1/1A	34	U	3.4	U	1.75	U	3.4	U	0.32	J
870/B/0SEDP1/FD	35	U	3.5	U	1.8	U	1.6	J	0.43	J

QUALIFIERS:
- A - Acceptable (Quantitative) Data
- J - Estimated (Semiquantitative) Data
- K - Value Biased High (Semiquantitative) Data
- L - Value Biased Low (Semiquantitative) Data
- B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
- UJ - Not Detected/Estimated Data
- U - Not Detected/Quantitative Data
- UL - Not Detected/Biased Low
- N - Tentative Identification
- R - Unusable Data
- Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

AR303514

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION – PESTICIDES AND PCBs
ELIZABETHTOWN LANDFILL

MATRIX: SEDIMENT
UNITS: ug/kg

SAMPLE POINT	Endrin	Qual	Endrin Aldehyde	Qual	Endrin Ketone	Qual	Heptachlor	Qual
870/B/0SEDP1/1A	0.45	J	3.4	U	3.4	U	1.75	U
870/B/0SEDP1/FD	0.23	J	3.5	U	3.5	U	1.8	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

AR303515

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION – PESTICIDES AND PCBs
ELIZABETHTOWN LANDFILL

MATRIX: SEDIMENT
UNITS: ug/kg

SAMPLE POINT	Heptachlor Epoxide	Qual	Methoxychlor	Qual	Toxaphene	Qual	alpha-BHC	Qual
870/B/0SEDP1/1A	1.75	U	17.5	U	175	U	1.75	U
870/B/0SEDP1/FD	0.82	J	18	U	180	U	1.8	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

AR303516

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION – PESTICIDES AND PCBs
ELIZABETHTOWN LANDFILL

MATRIX: SEDIMENT
UNITS: ug/kg

SAMPLE POINT	alpha-Chlordane	Qual	beta-BHC	Qual	delta-BHC	Qual	gamma-BHC (Lindane)	Qual
870/B/0SEDP1/1A	0.17	B	1.75	U	1.75	U	0.31	J
870/B/0SEDP1/FD	0.2	B	1.8	U	1.8	U	0.29	J

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

AR303517

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION – PESTICIDES AND PCBs
ELIZABETHTOWN LANDFILL

MATRIX: SEDIMENT
UNITS: ug/kg

SAMPLE POINT	gamma-Chlordane	Qual
870/B/0SEDP1/1A	1.75	U
870/B/0SEDP1/FD	1.8	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

TAL Inorganic Analytes

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION–INORGANICS
ELIZABETHTOWN LANDFILL

MATRIX: SEDIMENT
UNITS: mg/kg

SAMPLE POINT	Aluminum A	Qual	Antimony A	Qual	Arsenic A	Qual	Barium A	Qual	Beryllium A	Qual
870/B/0SEDP1/1A	15300	A	8.5	UL	4.3	A	193	A	1.1	A
870/B/0SEDP1/FD	14800	A	8.95	UL	3.5	A	180	A	1.1	A

A = Unfiltered
B = Filtered

AR303520

QUALIFIERS:

A – Acceptable (Quantitative) Data
J – Estimated (Semiquantitative) Data
K – Value Biased High (Semiquantitative) Data
L – Value Biased Low (Semiquantitative) Data
B – Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ – Not Detected/Estimated Data
U – Not Detected/Quantitative Data
UL – Not Detected/Biased Low
N – Tentative Identification
R – Unusable Data
Q – Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION–INORGANICS
ELIZABETHTOWN LANDFILL

MATRIX: SEDIMENT
UNITS: mg/kg

SAMPLE POINT	Cadmium A	Qual	Calcium A	Qual	Chromium A	Qual	Cobalt A	Qual	Copper A	Qual
870/B/0SEDP1/1A	1	U	2190	A	25	A	9.7	A	16.4	A
870/B/0SEDP1/FD	1.05	U	2370	A	23.8	A	9.1	A	18	A

A = Unfiltered
B = Filtered

QUALIFIERS:

- A - Acceptable (Quantitative) Data
- J - Estimated (Semiquantitative) Data
- K - Value Biased High (Semiquantitative) Data
- L - Value Biased Low (Semiquantitative) Data
- B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
- UJ - Not Detected/Estimated Data
- U - Not Detected/Quantitative Data
- UL - Not Detected/Biased Low
- N - Tentative Identification
- R - Unusable Data
- Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

AR303521

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION–INORGANICS
ELIZABETHTOWN LANDFILL

MATRIX: SEDIMENT
UNITS: mg/kg

SAMPLE POINT	Cyanide A	Qual	Iron A	Qual	Lead A	Qual	Magnesium A	Qual	Manganese A	Qual
870/B/0SEDP1/1A	0.5	U	21200	A	26	A	3550	A	492	A
870/B/0SEDP1/FD	0.55	U	19700	A	25.3	A	3330	A	513	A

A = Unfiltered
B = Filtered

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION–INORGANICS
ELIZABETHTOWN LANDFILL

MATRIX: SEDIMENT
UNITS: mg/kg

SAMPLE POINT	Mercury A	Qual	Nickel A	Qual	Potassium A	Qual	Selenium A	Qual	Silver A	Qual
870/B/0SEDP1/1A	0.04	U	29	A	1650	A	0.8	UL	2.05	UL
870/B/0SEDP1/FD	0.045	U	18.5	A	2390	A	0.85	UL	2.15	UL

A = Unfiltered
B = Filtered

QUALIFIERS:

- A - Acceptable (Quantitative) Data
- J - Estimated (Semiquantitative) Data
- K - Value Biased High (Semiquantitative) Data
- L - Value Biased Low (Semiquantitative) Data
- B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
- UJ - Not Detected/Estimated Data
- U - Not Detected/Quantitative Data
- UL - Not Detected/Biased Low
- N - Tentative Identification
- R - Unusable Data
- Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-INORGANICS
ELIZABETHTOWN LANDFILL

MATRIX: SEDIMENT
UNITS: mg/kg

SAMPLE POINT	Sodium A	Qual	Thallium A	Qual	Vanadium A	Qual	Zinc A	Qual
870/B/0SEDP1/1A	291	B	0.4	U	33.4	A	68.7	B
870/B/0SEDP1/FD	309	B	0.45	U	32.3	A	64.7	B

A = Unfiltered
B = Filtered

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Somiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

AR303524

APPENDIX D4

SOIL

TCL Volatile Organic Compounds

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-VOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	1,1,1-Trichloroethane	Qual	1,1,2,2-Tetrachloroethane	Qual	1,1,2-Trichloroethane	Qual
870/B/00SS01/1A	6	U	6	U	6	U
870/B/00SS02/1A	5	U	5	U	5	U
870/B/00SS03/1A	5.5	U	5.5	U	5.5	U
870/B/00SS04/1A	5.5	U	5.5	U	5.5	U
870/B/00SS05/1A	5.5	U	5.5	U	5.5	U
870/B/00SS06/1A	5	U	5	U	5	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)

UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low

N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:

For U, UJ and UI data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-VOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	1,1-Dichloroethane	Qual	1,1-Dichloroethene	Qual	1,2-Dichloroethane	Qual
870/B/00SS01/1A	6	U	6	U	6	U
870/B/00SS02/1A	5	U	5	U	5	U
870/B/00SS03/1A	5.5	U	5.5	U	5.5	U
870/B/00SS04/1A	5.5	U	5.5	U	5.5	U
870/B/00SS05/1A	5.5	U	5.5	U	5.5	U
870/B/00SS06/1A	5	U	5	U	5	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)

UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low

N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:

For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION–VOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	1,2-Dichloropropane	Qual	2-Butanone	Qual	2-Hexanone	Qual	4-Methyl-2-Pentanone	Qual
870/B/00SS01/1A	6	U	6	U	6	U	6	U
870/B/00SS02/1A	5	U	5	U	5	U	5	U
870/B/00SS03/1A	5.5	U	5.5	U	5.5	U	5.5	U
870/B/00SS04/1A	5.5	U	5.5	U	5.5	U	5.5	U
870/B/00SS05/1A	5.5	U	5.5	U	5.5	U	5.5	U
870/B/00SS06/1A	5	U	5	U	5	U	5	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION–VOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	Acetone	Qual	Benzene	Qual	Bromodichloromethane	Qual	Bromoform	Qual
870/B/00SS01/1A	79	B	6	U	6	U	6	U
870/B/00SS02/1A	160	B	5	U	5	U	5	U
870/B/00SS03/1A	88	B	5.5	U	5.5	U	5.5	U
870/B/00SS04/1A	27	B	5.5	U	5.5	U	5.5	U
870/B/00SS05/1A	25	B	5.5	U	5.5	U	5.5	U
870/B/00SS06/1A	40	B	5	U	5	U	5	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-VOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	Bromomethane	Qual	Carbon Disulfide	Qual	Carbon Tetrachloride	Qual	Chlorobenzene	Qual
870/B/00SS01/1A	6	U	6	U	6	U	6	U
870/B/00SS02/1A	5	U	5	U	5	U	5	U
870/B/00SS03/1A	5.5	U	5.5	U	5.5	U	5.5	U
870/B/00SS04/1A	5.5	U	5.5	U	5.5	U	5.5	U
870/B/00SS05/1A	5.5	U	5.5	U	5.5	U	5.5	U
870/B/00SS06/1A	5	U	5	U	5	U	5	U

AR303531

QUALIFIERS:
- A - Acceptable (Quantitative) Data
- J - Estimated (Semiquantitative) Data
- K - Value Biased High (Semiquantitative) Data
- L - Value Biased Low (Semiquantitative) Data
- B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
- UJ - Not Detected/Estimated Data
- U - Not Detected/Quantitative Data
- UL - Not Detected/Biased Low
- N - Tentative Identification
- R - Unusable Data
- Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-VOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg '

SAMPLE POINT	Chloroethane	Qual	Chloroform	Qual	Chloromethane	Qual	Dibromochloromethane	Qual
870/B/00SS01/1A	6	U	6	U	6	U	6	U
870/B/00SS02/1A	5	U	5	U	5	U	5	U
870/B/00SS03/1A	5.5	U	5.5	U	5.5	U	5.5	U
870/B/00SS04/1A	5.5	U	5.5	U	5.5	U	5.5	U
870/B/00SS05/1A	5.5	U	5.5	U	5.5	U	5.5	U
870/B/00SS06/1A	5	U	5	U	5	U	5	U

QUALIFIERS:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-VOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	Ethylbenzene	Qual	Methylene Chloride	Qual	Styrene	Qual	Tetrachloroethene	Qual
870/B/00SS01/1A	6	U	68	B	6	U	6	U
870/B/00SS02/1A	5	U	13	B	5	U	5	U
870/B/00SS03/1A	5.5	U	14	B	5.5	U	5.5	U
870/B/00SS04/1A	5.5	U	16	B	5.5	U	5.5	U
870/B/00SS05/1A	5.5	U	33	B	5.5	U	5.5	U
870/B/00SS06/1A	5	U	32	B	5	U	5	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-VOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	Toluene	Qual	Total 1,2-Dichloroethene	Qual	Total Xylenes	Qual	Trichloroethene	ua
870/B/00SS01/1A	6	U	6	U	6	U	6	U
870/B/00SS02/1A	5	U	5	U	5	U	5	U
870/B/00SS03/1A	5.5	U	5.5	U	5.5	U	5.5	U
870/B/00SS04/1A	5.5	U	5.5	U	5.5	U	5.5	U
870/B/00SS05/1A	5.5	U	5.5	U	5.5	U	5.5	U
870/B/00SS06/1A	5	U	5	U	5	U	5	U

AR303534

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-VOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	Vinyl Chloride	ua	cis-1,3-Dichloropropene	Qual	trans-1,3-Dichloropropene	Qual
870/B/00SS01/1A	6	U	6	U	6	U
870/B/00SS02/1A	5	U	5	U	5	U
870/B/00SS03/1A	5.5	U	5.5	U	5.5	U
870/B/00SS04/1A	5.5	U	5.5	U	5.5	U
870/B/00SS05/1A	5.5	U	5.5	U	5.5	U
870/B/00SS06/1A	5	U	5	U	5	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

TCL Semivolatile Organic Compounds

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-SEMIVOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	1,2,4-Trichlorobenzene	Qual	1,2-Dichlorobenzene	Qual	1,3-Dichlorobenzene	Qual
870/B/00SS01/1A	195	U	195	U	195	U
870/B/00SS02/1A	165	U	165	U	165	U
870/B/00SS03/1A	185	U	185	U	185	U
870/B/00SS03/RE	180	U	180	U	180	U
870/B/00SS04/1A	185	U	185	U	185	U
870/B/00SS05/1A	180	U	180	U	180	U
870/B/00SS06/1A	170	U	170	U	170	U

QUALIFIERS:
- A - Acceptable (Quantitative) Data
- J - Estimated (Semiquantitative) Data
- K - Value Biased High (Semiquantitative) Data
- L - Value Biased Low (Semiquantitative) Data
- B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
- UJ - Not Detected/Estimated Data
- U - Not Detected/Quantitative Data
- UL - Not Detected/Biased Low
- N - Tentative Identification
- R - Unusable Data
- Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION–SEMIVOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	1,4–Dichlorobenzene	Qual	2,2'–Oxybis(1–Chloropropane)	Qual	2,4,5–Trichlorophenol	Qual
870/B/00SS01/1A	195	U	195	U	475	U
870/B/00SS02/1A	165	U	165	U	405	U
870/B/00SS03/1A	185	U	185	U	890	R
870/B/00SS03/RE	180	U	180	U	440	U
870/B/00SS04/1A	185	U	185	U	445	U
870/B/00SS05/1A	180	U	180	U	440	U
870/B/00SS06/1A	170	U	170	U	415	U

QUALIFIERS:

A – Acceptable (Quantitative) Data
J – Estimated (Semiquantitative) Data
K – Value Biased High (Semiquantitative) Data
L – Value Biased Low (Semiquantitative) Data
B – Reported Concentration Within Blank Action Level Range (Semiquantitative Data)

UJ – Not Detected/Estimated Data
U – Not Detected/Quantitative Data
UL – Not Detected/Biased Low

N – Tentative Identification
R – Unusable Data
Q – Not Applicable

NOTE:

For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

AR303538

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-SEMIVOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	2,4,6-Trichlorophenol	Qual	2,4-Dichlorophenol	Qual	2,4-Dimethylphenol	Qual	2,4-Dinitrophenol	Qual
870/B/00SS01/1A	195	U	195	U	195	U	475	U
870/B/00SS02/1A	165	U	165	U	165	U	405	U
870/B/00SS03/1A	370	R	370	R	370	R	890	R
870/B/00SS03/RE	180	U	180	U	180	U	440	U
870/B/00SS04/1A	185	U	185	U	185	U	445	U
870/B/00SS05/1A	180	U	180	U	180	U	440	U
870/B/00SS06/1A	170	U	170	U	170	U	415	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:

For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-SEMIVOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	2,4-Dinitrotoluene	Qual	2,6-Dinitrotoluene	Qual	2-Chloronaphthalene	Qual	2-Chlorophenol	Qual
870/B/00SS01/1A	195	U	195	U	195	U	195	U
870/B/00SS02/1A	165	U	165	U	165	U	165	U
870/B/00SS03/1A	185	U	185	U	185	U	370	R
870/B/00SS03/RE	180	U	180	U	180	U	180	U
870/B/00SS04/1A	185	U	185	U	185	U	185	U
870/B/00SS05/1A	180	U	180	U	180	U	180	U
870/B/00SS06/1A	170	U	170	U	170	U	170	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-SEMIVOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	2-Methylnaphthalene	Qual	2-Methylphenol	Qual	2-Nitroaniline	Qual	2-Nitrophenol	Qual
870/B/00SS01/1A	195	U	195	U	475	U	195	U
870/B/00SS02/1A	165	U	165	U	405	U	165	U
870/B/00SS03/1A	185	U	370	R	445	U	370	R
870/B/00SS03/RE	180	U	180	U	440	U	180	U
870/B/00SS04/1A	185	U	185	U	445	U	185	U
870/B/00SS05/1A	180	U	180	U	440	U	180	U
870/B/00SS06/1A	170	U	170	U	415	U	170	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-SEMIVOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	3,3'-Dichlorobenzidine	Qual	3-Nitroaniline	Qual	4,6-Dinitro-2-methylphenol	Qual
870/B/00SS01/1A	195	U	475	U	475	U
870/B/00SS02/1A	165	U	405	U	405	U
870/B/00SS03/1A	185	U	445	U	890	R
870/B/00SS03/RE	180	U	440	U	440	U
870/B/00SS04/1A	185	U	445	U	445	U
870/B/00SS05/1A	180	U	440	U	440	U
870/B/00SS06/1A	170	U	415	U	415	U

QUALIFIERS:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION–SEMIVOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	4–Bromophenyl–phenylether	Qual	4–Chloro–3–Methylphenol	Qual	4–Chloroaniline	Qual
870/B/00SS01/1A	195	U	195	U	195	U
870/B/00SS02/1A	165	U	165	U	165	U
870/B/00SS03/1A	185	U	370	R	185	U
870/B/00SS03/RE	180	U	180	U	180	U
870/B/00SS04/1A	185	U	185	U	185	U
870/B/00SS05/1A	180	U	180	U	180	U
870/B/00SS06/1A	170	U	170	U	170	U

QUALIFIERS:
- A - Acceptable (Quantitative) Data
- J - Estimated (Semiquantitative) Data
- K - Value Biased High (Semiquantitative) Data
- L - Value Biased Low (Semiquantitative) Data
- B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
- UJ - Not Detected/Estimated Data
- U - Not Detected/Quantitative Data
- UL - Not Detected/Biased Low
- N - Tentative Identification
- R - Unusable Data
- Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION–SEMIVOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	4–Chlorophenyl–phenylether	Qual	4–Methylphenol	Qual	4–Nitroaniline	Qual	4–Nitrophenol	Qual
870/B/00SS01/1A	195	U	195	U	475	U	475	U
870/B/00SS02/1A	165	U	165	U	405	U	405	U
870/B/00SS03/1A	185	U	370	R	445	U	890	R
870/B/00SS03/RE	180	U	180	U	440	U	440	U
870/B/00SS04/1A	185	U	185	U	445	U	445	U
870/B/00SS05/1A	180	U	180	U	440	U	440	U
870/B/00SS06/1A	170	U	170	U	415	U	415	U

AR303544

QUALIFIERS:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-SEMIVOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	Acenaphthene	Qual	Acenaphthylene	Qual	Anthracene	Qual	Benzo(a)Anthracene	Qual
870/B/00SS01/1A	195	U	195	U	195	U	195	U
870/B/00SS02/1A	165	U	165	U	165	U	165	U
870/B/00SS03/1A	185	U	185	U	185	U	160	B
870/B/00SS03/RE	180	U	180	U	180	U	73	B
870/B/00SS04/1A	185	U	185	U	185	U	185	U
870/B/00SS05/1A	180	U	180	U	180	U	180	U
870/B/00SS06/1A	170	U	170	U	170	U	170	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-SEMIVOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	Benzo(a)Pyrene	Qual	Benzo(b)Fluoranthene	Qual	Benzo(g,h,i)Perylene	Qual	Benzo(k)Fluoranthene	Qual
870/B/00SS01/1A	195	U	195	U	195	U	195	U
870/B/00SS02/1A	165	U	165	U	165	U	165	U
870/B/00SS03/1A	77	J	190	J	185	U	190	J
870/B/00SS03/RE	100	J	230	J	180	U	230	J
870/B/00SS04/1A	185	U	185	U	185	U	185	U
870/B/00SS05/1A	180	U	180	U	180	U	180	U
870/B/00SS06/1A	170	U	170	U	170	U	170	U

AR303546

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:

For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-SEMIVOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	Butylbenzylphthalate	Qual	Carbazole	Qual	Chrysene	Qual	Di-n-Octyl Phthalate	Qual
870/B/00SS01/1A	195	U	195	U	195	U	195	U
870/B/00SS02/1A	165	U	165	U	165	U	165	U
870/B/00SS03/1A	185	U	185	U	69	B	185	U
870/B/00SS03/RE	180	U	41	J	83	B	180	U
870/B/00SS04/1A	185	U	185	U	185	U	185	U
870/B/00SS05/1A	180	U	180	U	180	U	180	U
870/B/00SS06/1A	170	U	170	U	170	U	170	U

QUALIFIERS:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION–SEMIVOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	Di-n-butylphthalate	Qual	Dibenz(a,h)Anthracene	Qual	Dibenzofuran	Qual	Diethylphthalate	Qual
870/B/00SS01/1A	195	U	195	U	195	U	195	U
870/B/00SS02/1A	165	U	165	U	165	U	165	U
870/B/00SS03/1A	185	U	185	U	185	U	185	U
870/B/00SS03/RE	180	U	180	U	180	U	180	U
870/B/00SS04/1A	185	U	185	U	185	U	185	U
870/B/00SS05/1A	180	U	180	U	180	U	180	U
870/B/00SS06/1A	170	U	170	U	170	U	170	U

QUALIFIERS:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION–SEMIVOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	Dimethyl Phthalate	Qual	Fluoranthene	Qual	Fluorene	Qual	Hexachlorobenzene	Qual
870/B/00SS01/1A	195	U	195	U	195	U	195	U
870/B/00SS02/1A	165	U	165	U	165	U	165	U
870/B/00SS03/1A	185	U	170	J	185	U	185	U
870/B/00SS03/RE	180	U	77	J	180	U	180	U
870/B/00SS04/1A	185	U	185	U	185	U	185	U
870/B/00SS05/1A	180	U	180	U	180	U	180	U
870/B/00SS06/1A	170	U	170	U	170	U	170	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION–SEMIVOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	Hexachlorobutadiene	Qual	Hexachlorocyclopentadiene	Qual	Hexachloroethane	Qual
870/B/00SS01/1A	195	U	195	U	195	U
870/B/00SS02/1A	165	U	165	U	165	U
870/B/00SS03/1A	185	U	185	U	185	U
870/B/00SS03/RE	180	U	180	U	180	U
870/B/00SS04/1A	185	U	185	U	185	U
870/B/00SS05/1A	180	U	180	U	180	U
870/B/00SS06/1A	170	U	170	U	170	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:

For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-SEMIVOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	Indeno(1,2,3-cd)Pyrene	Qual	Isophorone	Qual	N-Nitroso-di-n-propylamine	Qual
870/B/00SS01/1A	195	U	195	U	195	U
870/B/00SS02/1A	165	U	165	U	165	U
870/B/00SS03/1A	185	U	185	U	185	U
870/B/00SS03/RE	37	J	180	U	180	U
870/B/00SS04/1A	185	U	185	U	185	U
870/B/00SS05/1A	180	U	180	U	180	U
870/B/00SS06/1A	170	U	170	U	170	U

AR303551

QUALIFIERS:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION–SEMIVOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	N-Nitrosodiphenylamine	Qual	Naphthalene	Qual	Nitrobenzene	Qual	Pentachlorophenol	Qual
870/B/00SS01/1A	195	U	195	U	195	U	475	U
870/B/00SS02/1A	165	U	165	U	165	U	405	U
870/B/00SS03/1A	185	U	185	U	185	U	890	R
870/B/00SS03/RE	180	U	180	U	180	U	440	U
870/B/00SS04/1A	185	U	185	U	185	U	445	U
870/B/00SS05/1A	180	U	180	U	180	U	440	U
870/B/00SS06/1A	170	U	170	U	170	U	415	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-SEMIVOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	Phenanthrene	Qual	Phenol	Qual	Pyrene	Qual	bis(2-Chloroethoxy)Methane	Qual
870/B/00SS01/1A	195	U	195	U	195	U	195	U
870/B/00SS02/1A	165	U	165	U	165	U	165	U
870/B/00SS03/1A	86	J	54	L	110	J	185	U
870/B/00SS03/RE	55	J	180	U	75	J	180	U
870/B/00SS04/1A	185	U	185	U	185	U	185	U
870/B/00SS05/1A	180	U	180	U	180	U	180	U
870/B/00SS06/1A	170	U	170	U	170	U	170	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-SEMIVOLATILES
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	bis(2-Chloroethyl)ether	Qual	bis(2-Ethylhexyl)Phthalate	Qual
870/B/00SS01/1A	195	U	195	U
870/B/00SS02/1A	165	U	80	B
870/B/00SS03/1A	185	U	180	B
870/B/00SS03/RE	180	U	120	B
870/B/00SS04/1A	185	U	88	B
870/B/00SS05/1A	180	U	59	B
870/B/00SS06/1A	170	U	170	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

TCL Pesticides and PCBs

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION – PESTICIDES AND PCBs
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	4,4'-DDD	Qual	4,4'-DDE	Qual	4,4'-DDT	Qual	Aldrin	Qual	Aroclor-1016	Qual
870/B/00SS01/1A	0.25	J	3.2	J	2.3	J	0.12	J	19.5	U
870/B/00SS02/1A	1.65	U	1.65	U	0.89	B	0.85	U	16.5	U
870/B/00SS03/1A	1.85	U	1.85	U	1.85	U	0.6	J	18.5	U
870/B/00SS04/1A	0.57	J	1.8	U	1.8	U	0.083	J	18	U
870/B/00SS04/DL	9	U	9	U	1.7	B	4.65	U	90	U
870/B/00SS05/1A	1.8	U	0.58	J	0.67	B	0.95	U	18	U
870/B/00SS06/1A	1.7	U	1.7	U	1.9	J	0.9	U	17	U

AR303556

QUALIFIERS:

A – Acceptable (Quantitative) Data
J – Estimated (Semiquantitative) Data
K – Value Biased High (Semiquantitative) Data
L – Value Biased Low (Semiquantitative) Data
B – Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ – Not Detected/Estimated Data
U – Not Detected/Quantitative Data
UL – Not Detected/Biased Low
N – Tentative Identification
R – Unusable Data
Q – Not Applicable

NOTE:

For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION - PESTICIDES AND PCBs
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	Aroclor-1221	Qual	Aroclor-1232	Qual	Aroclor-1242	Qual	Aroclor-1248	Qual	Aroclor-1254	Qual
870/B/00SS01/1A	40	U	19.5	U	19.5	U	19.5	U	19.5	U
870/B/00SS02/1A	34	U	16.5	U	16.5	U	16.5	U	16.5	U
870/B/00SS03/1A	37	U	18.5	U	18.5	U	18.5	U	18.5	U
870/B/00SS04/1A	36.5	U	18	U	18	U	18	U	18	U
870/B/00SS04/DL	185	U	90	U	90	U	90	U	90	U
870/B/00SS05/1A	36.5	U	18	U	18	U	18	U	18	U
870/B/00SS06/1A	35	U	17	U	17	U	17	U	17	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION – PESTICIDES AND PCBs
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	Aroclor-1260	Qual	Dieldrin	Qual	Endosulfan I	Qual	Endosulfan II	Qual	Endosulfan Sulfate	Qual
870/B/00SS01/1A	19.5	U	0.96	J	1	U	1.95	U	0.25	J
870/B/00SS02/1A	16.5	U	1.65	U	0.85	U	1.65	U	1.65	U
870/B/00SS03/1A	18.5	U	1.85	U	0.31	B	1.85	U	1.85	U
870/B/00SS04/1A	18	U	110	J	0.95	U	1.8	U	0.36	J
870/B/00SS04/DL	90	U	150	A	4.65	U	9	U	9	U
870/B/00SS05/1A	18	U	1.8	U	0.95	U	1.8	U	1.8	U
870/B/00SS06/1A	17	U	1.7	U	0.9	U	1.7	U	1.7	U

AR303558

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION – PESTICIDES AND PCBs
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	Endrin	Qual	Endrin Aldehyde	Qual	Endrin Ketone	Qual	Heptachlor	Qual	Heptachlor Epoxide	Qual
870/B/00SS01/1A	1.95	U	1.95	U	1.95	U	0.16	J	0.96	J
870/B/00SS02/1A	1.65	U	1.65	U	1.65	U	0.85	U	0.85	U
870/B/00SS03/1A	1.85	U	1.3	J	1.85	U	0.95	U	0.95	U
870/B/00SS04/1A	0.86	J	1.8	U	1.8	U	0.18	J	2.5	A
870/B/00SS04/DL	1.4	J	9	U	9	U	4.65	U	2.7	J
870/B/00SS05/1A	1.8	U	1.8	U	1.8	U	0.076	J	0.95	U
870/B/00SS06/1A	1.7	U	1.7	U	1.7	U	0.9	U	0.9	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION – PESTICIDES AND PCBs
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	Methoxychlor	Qual	Toxaphene	Qual	alpha-BHC	Qual	alpha-Chlordane	Qual
870/B/00SS01/1A	0.53	J	100	U	1	U	1	U
870/B/00SS02/1A	0.45	B	85	U	0.85	U	0.85	U
870/B/00SS03/1A	0.97	B	95	U	0.95	U	1.6	J
870/B/00SS04/1A	0.47	B	95	U	0.95	U	0.24	J
870/B/00SS04/DL	2.2	B	465	U	4.65	U	4.65	U
870/B/00SS05/1A	9.5	U	95	U	0.95	U	0.95	U
870/B/00SS06/1A	4.8	B	90	U	0.9	U	0.9	U

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION – PESTICIDES AND PCBs
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: ug/kg

SAMPLE POINT	beta-BHC	Qual	delta-BHC	Qual	gamma-BHC (Lindane)	Qual	gamma-Chlordane	Qual
870/B/00SS01/1A	1	U	1	U	1	U	1	U
870/B/00SS02/1A	0.85	U	0.85	U	0.85	U	0.85	U
870/B/00SS03/1A	0.95	U	0.95	U	0.42	J	0.71	B
870/B/00SS04/1A	0.95	U	0.95	U	0.13	J	0.43	B
870/B/00SS04/DL	4.65	U	4.65	U	4.65	U	0.49	B
870/B/00SS05/1A	0.95	U	0.95	U	0.95	U	0.087	B
870/B/00SS06/1A	0.9	U	0.9	U	0.9	U	0.9	U

QUALIFIERS:
- A – Acceptable (Quantitative) Data
- J – Estimated (Semiquantitative) Data
- K – Value Biased High (Semiquantitative) Data
- L – Value Biased Low (Semiquantitative) Data
- B – Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
- UJ – Not Detected/Estimated Data
- U – Not Detected/Quantitative Data
- UL – Not Detected/Biased Low
- N – Tentative Identification
- R – Unusable Data
- Q – Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

TAL Inorganic Analytes

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-INORGANICS
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: mg/kg

SAMPLE POINT	Aluminum A	Qual	Antimony A	Qual	Arsenic A	Qual	Barium A	Qual	Beryllium A	Qual
870/B/00SS01/1A	18900	A	5	UL	8.9	A	147	A	1.6	A
870/B/00SS02/1A	3800	A	4.3	UL	1.7	A	34.5	K	0.2	U
870/B/00SS03/1A	13000	A	4.7	UL	3	A	138	A	1	A
870/B/00SS04/1A	14800	A	4.65	UL	0.93	A	83.9	A	0.75	A
870/B/00SS05/1A	10300	A	4.65	UL	3.4	A	131	A	1	A
870/B/00SS06/1A	15700	A	4.35	UL	3.7	A	61.2	A	0.9	A

A = Unfiltered
B = Filtered

AR303563

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION–INORGANICS
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: mg/kg

SAMPLE POINT	Cadmium A	Qual	Calcium A	Qual	Chromium A	Qual	Cobalt A	Qual	Copper A	Qual
870/B/00SS01/1A	0.6	U	1810	A	51.1	A	16.1	A	20.8	A
870/B/00SS02/1A	0.5	U	148000	A	5.5	A	2.9	R	6.8	A
870/B/00SS03/1A	0.55	U	28200	A	51.3	A	9.6	A	39	A
870/B/00SS04/1A	0.55	U	1080	A	15.8	A	5.4	A	7.7	A
870/B/00SS05/1A	0.55	U	518	A	10.9	A	6.3	A	6.5	A
870/B/00SS06/1A	0.5	U	1130	A	20.1	A	8.8	A	12.6	A

A = Unfiltered
B = Filtered

AR303564

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION–INORGANICS
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: mg/kg

SAMPLE POINT	Cyanide A	Qual	Iron A	Qual	Lead A	Qual	Magnesium A	Qual	Manganese A	Qual
870/B/00SS01/1A	0.3	U	44000	A	43.2	A	2180	A	1610	A
870/B/00SS02/1A	0.25	U	8210	A	5.5	A	29300	A	155	K
870/B/00SS03/1A	0.3	U	31300	A	119	A	7110	A	1970	A
870/B/00SS04/1A	0.3	U	13400	A	7.9	A	1580	A	365	A
870/B/00SS05/1A	0.3	U	13300	A	24.3	A	1320	A	1080	A
870/B/00SS06/1A	0.25	U	19500	A	12.8	A	3280	A	331	A

A = Unfiltered
B = Filtered

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION–INORGANICS
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: mg/kg

SAMPLE POINT	Mercury A	Qual	Nickel A	Qual	Potassium A	Qual	Selenium A	Qual	Silver A	Qual
870/B/00SS01/1A	0.025	U	20.2	A	1670	A	0.5	UL	1.2	UL
870/B/00SS02/1A	0.02	U	7.2	A	1640	A	0.4	UL	1	UL
870/B/00SS03/1A	0.02	U	41.5	A	1680	A	0.45	UL	1.1	UL
870/B/00SS04/1A	0.02	U	9.8	A	1150	A	0.45	UL	1.1	UL
870/B/00SS05/1A	0.02	U	9	A	794	A	0.45	UL	1.1	UL
870/B/00SS06/1A	0.02	U	17.5	A	1480	A	0.4	UL	1.05	UL

A = Unfiltered
B = Filtered

AR303566

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

PHASE 1A DATA FOR RISK ASSESSMENT CALCULATION-INORGANICS
ELIZABETHTOWN LANDFILL

MATRIX: SOIL
UNITS: mg/kg

SAMPLE POINT	Sodium A	Qual	Thallium A	Qual	Vanadium A	Qual	Zinc A	Qual
870/B/00SS01/1A	138	B	0.25	U	53.9	A	61.5	A
870/B/00SS02/1A	119	B	0.2	UL	6.7	A	15.9	B
870/B/00SS03/1A	275	B	0.2	U	21.4	A	1060	A
870/B/00SS04/1A	133	B	0.2	U	23.5	A	38	B
870/B/00SS05/1A	105	B	0.2	U	17.9	A	33.1	B
870/B/00SS06/1A	197	B	0.2	U	27.1	A	38.9	B

A = Unfiltered
B = Filtered

QUALIFIERS:

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Value Biased High (Semiquantitative) Data
L - Value Biased Low (Semiquantitative) Data
B - Reported Concentration Within Blank Action Level Range (Semiquantitative Data)
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

NOTE:
For U, UJ and UL data, the reported concentration equals half of the Sample Quantitation Limit(SQL).

APPENDIX E

HISTORICAL DATA

APPENDIX E1

WMI–ENVIRONMENTAL MONITORING LABORATORY

Data Summary of Historical Results

ENVIRONMENTAL MONITORING LABORATORY
DATA SUMMARY OF HISTORICAL GROUNDWATER CHEMISTRY RESULTS

CONTAMINANT	UNITS	# OF SAMPLES COLLECTED	FREQUENCY OF DETECTION	# DETECTED ABOVE SQL	HIGHEST DETECTED CONC.	LOWEST DETECTED CONC. ABOVE DETECTION LIMIT	AVERAGE DETECTED CONC.
1,1,1-Trichloroethane	ug/l	129	9/129	9	77	5	12.64
1,2-Dichloroethane	ug/l	129	1/129	1	240	240	12.20
1,2-Dichloropropane	ug/l	129	1/129	1	7.5	7.5	10.65
1,4-Dichlorobenzene	ug/l	129	0/129	0	NA	NA	12.18
Phenols	mg/l	148	2/146	2	0.86	0.86	0.03
Tetrachloroethene	ug/l	116	0/116	0	NA	NA	11.60
Toluene	ug/l	129	10/129	10	950	6	33.95
cis-1,2-Dichloroethene	ug/l	102	4/102	4	82	41	14.86
Xylene, Total	ug/l	102	0/102	0	NA	NA	13.34

NOTES:

NA - Not Applicable, contaminant has not been reported above the detection limit in this historical database.

Historical Groundwater Chemistry Data

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED1R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890816	1,1,1-Trichloroethane	ug/l	ND	5.000
900620	1,1,1-Trichloroethane	ug/l	ND	5.000
901030	1,1,1-Trichloroethane	ug/l	ND	5.000
890816	1,2-Dichloroethane	ug/l	ND	5.000
900620	1,2-Dichloroethane	ug/l	ND	5.000
901030	1,2-Dichloroethane	ug/l	ND	5.000
890816	1,2-Dichloropropane	ug/l	ND	5.000
900620	1,2-Dichloropropane	ug/l	ND	5.000
901030	1,2-Dichloropropane	ug/l	ND	5.000
890816	1,4-Dichlorobenzene	ug/l	ND	10.000
900620	1,4-Dichlorobenzene	ug/l	ND	10.000
901030	1,4-Dichlorobenzene	ug/l	ND	10.000
900620	cis-1,2-Dichloroethene	ug/l	ND	10.000
901030	cis-1,2-Dichloroethene	ug/l	ND	10.000
890816	Phenols	mg/l	ND	0.050
890816	Phenols	mg/l	ND	0.050
890816	Phenols	mg/l	ND	0.050
890816	Phenols	mg/l	ND	0.050
901030	Phenols	mg/l	ND	0.050
901030	Phenols	mg/l	ND	0.050
900620	Tetrachloroethene	ug/l	ND	5.000
901030	Tetrachloroethene	ug/l	ND	5.000
890816	Toluene	ug/l	ND	5.000
900620	Toluene	ug/l	ND	5.000
901030	Toluene	ug/l	ND	5.000
900620	Xylene (Total)	ug/l	10.00	10.000
901030	Xylene (Total)	ug/l	10.00	10.000

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED1S

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890816	1,1,1-Trichloroethane	ug/l	ND	5.000
890818	1,1,1-Trichloroethane	ug/l	ND	5.000
890823	1,1,1-Trichloroethane	ug/l		5.000
900620	1,1,1-Trichloroethane	ug/l	ND	5.000
901030	1,1,1-Trichloroethane	ug/l	ND	5.000
910314	1,1,1-Trichloroethane	ug/l	ND	5.000
910823	1,1,1-Trichloroethane	ug/l	ND	100.00
920327	1,1,1-Trichloroethane	ug/l	ND	5.000
890816	1,2-Dichloroethane	ug/l	ND	5.000
890818	1,2-Dichloroethane	ug/l	ND	5.000
890823	1,2-Dichloroethane	ug/l		5.000
900620	1,2-Dichloroethane	ug/l	ND	5.000
901030	1,2-Dichloroethane	ug/l	ND	5.000
910314	1,2-Dichloroethane	ug/l	ND	5.000
910823	1,2-Dichloroethane	ug/l	ND	100.00
920327	1,2-Dichloroethane	ug/l	ND	5.000
890816	1,2-Dichloropropane	ug/l	ND	5.000
890818	1,2-Dichloropropane	ug/l	ND	5.000
890823	1,2-Dichloropropane	ug/l		5.000
900620	1,2-Dichloropropane	ug/l	ND	5.000
901030	1,2-Dichloropropane	ug/l	ND	5.000
910314	1,2-Dichloropropane	ug/l	ND	5.000
910823	1,2-Dichloropropane	ug/l	ND	100.00
920327	1,2-Dichloropropane	ug/l	ND	5.000
890816	1,4-Dichlorobenzene	ug/l	ND	10.000
890818	1,4-Dichlorobenzene	ug/l	ND	10.000
890823	1,4-Dichlorobenzene	ug/l		10.000
900620	1,4-Dichlorobenzene	ug/l	ND	10.000
901030	1,4-Dichlorobenzene	ug/l	ND	10.000
910314	1,4-Dichlorobenzene	ug/l	ND	10.000
910823	1,4-Dichlorobenzene	ug/l	ND	100.00
920327	1,4-Dichlorobenzene	ug/l	ND	10.000
900620	cis-1,2-Dichloroethene	ug/l	ND	10.000
901030	cis-1,2-Dichloroethene	ug/l	ND	10.000
910314	cis-1,2-Dichloroethene	ug/l	ND	10.000
910823	cis-1,2-Dichloroethene	ug/l	ND	100.00
920327	cis-1,2-Dichloroethene	ug/l	ND	10.000
890816	Phenols	mg/l	ND	0.050
890816	Phenols	mg/l	ND	0.050
890816	Phenols	mg/l	ND	0.050
890816	Phenols	mg/l	ND	0.050
890818	Phenols	mg/l	ND	0.050
890818	Phenols	mg/l	ND	0.050
890823	Phenols	mg/l		0.050
890823	Phenols	mg/l		0.050
901030	Phenols	mg/l	ND	0.050
901030	Phenols	mg/l	ND	0.050
910823	Phenols	mg/l	ND	0.050
910823	Phenols	mg/l	ND	0.050
900620	Tetrachloroethene	ug/l	ND	5.000
901030	Tetrachloroethene	ug/l	ND	5.000
910314	Tetrachloroethene	ug/l	ND	5.000
910823	Tetrachloroethene	ug/l	ND	100.00
920327	Tetrachloroethene	ug/l	ND	5.000

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED1S

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890816	Toluene	ug/l	ND	5.000
890818	Toluene	ug/l	ND	5.000
890823	Toluene	ug/l		5.000
900620	Toluene	ug/l	ND	5.000
901030	Toluene	ug/l	ND	5.000
910314	Toluene	ug/l	ND	5.000
910823	Toluene	ug/l	ND	100.00
920327	Toluene	ug/l	ND	5.000
900620	Xylene (Total)	ug/l	10.00	10.000
901030	Xylene (Total)	ug/l	10.00	10.000
910314	Xylene (Total)	ug/l	10.00	10.000
910823	Xylene (Total)	ug/l	100.00	100.00
920327	Xylene (Total)	ug/l	10.00	10.000

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED2R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890818	1,1,1-Trichloroethane	ug/l	ND	50.00
900621	1,1,1-Trichloroethane	ug/l	ND	5.000
901025	1,1,1-Trichloroethane	ug/l	ND	100.00
910313	1,1,1-Trichloroethane	ug/l	ND	100.00
910822	1,1,1-Trichloroethane	ug/l	ND	83.35
920327	1,1,1-Trichloroethane	ug/l	ND	50.00
890818	1,2-Dichloroethane	ug/l	ND	50.00
900621	1,2-Dichloroethane	ug/l	ND	5.000
901025	1,2-Dichloroethane	ug/l	ND	100.00
910313	1,2-Dichloroethane	ug/l	ND	100.00
910822	1,2-Dichloroethane	ug/l	ND	83.35
920327	1,2-Dichloroethane	ug/l	ND	50.00
890818	1,2-Dichloropropane	ug/l	ND	50.00
900621	1,2-Dichloropropane	ug/l	ND	5.000
901025	1,2-Dichloropropane	ug/l	ND	100.00
910313	1,2-Dichloropropane	ug/l	ND	100.00
910822	1,2-Dichloropropane	ug/l	ND	83.35
920327	1,2-Dichloropropane	ug/l	ND	50.00
890818	1,4-Dichlorobenzene	ug/l	ND	50.00
900621	1,4-Dichlorobenzene	ug/l	ND	10.000
901025	1,4-Dichlorobenzene	ug/l	ND	100.00
910313	1,4-Dichlorobenzene	ug/l	ND	100.00
910822	1,4-Dichlorobenzene	ug/l	ND	83.35
920327	1,4-Dichlorobenzene	ug/l	ND	50.00
900621	cis-1,2-Dichloroethene	ug/l	ND	10.000
901025	cis-1,2-Dichloroethene	ug/l	ND	100.00
910313	cis-1,2-Dichloroethene	ug/l	ND	100.00
910822	cis-1,2-Dichloroethene	ug/l	ND	83.35
920327	cis-1,2-Dichloroethene	ug/l	ND	50.00
890818	Phenols	mg/l	ND	0.050
890818	Phenols	mg/l	ND	0.050
901025	Phenols	mg/l	ND	0.050
901025	Phenols	mg/l	ND	0.050
910822	Phenols	mg/l	ND	0.050
910822	Phenols	mg/l	ND	0.050
890818	Tetrachloroethene	ug/l	ND	50.00
900621	Tetrachloroethene	ug/l	ND	5.000
901025	Tetrachloroethene	ug/l	ND	100.00
910313	Tetrachloroethene	ug/l	ND	100.00
910822	Tetrachloroethene	ug/l	ND	83.35
920327	Tetrachloroethene	ug/l	ND	50.00
890818	Toluene	ug/l	ND	50.00
900621	Toluene	ug/l	ND	5.000
901025	Toluene	ug/l	ND	100.00
910313	Toluene	ug/l	ND	100.00
910822	Toluene	ug/l	ND	83.35
920327	Toluene	ug/l	ND	50.00
900621	Xylene (Total)	ug/l	10.00	10.000
901025	Xylene (Total)	ug/l	100.00	100.00
910313	Xylene (Total)	ug/l	100.00	100.00
910822	Xylene (Total)	ug/l	83.35	83.35
920327	Xylene (Total)	ug/l	50.00	50.00

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED2S

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
901025	1,1,1-Trichloroethane	ug/l	ND	5.000
901025	1,2-Dichloroethane	ug/l	ND	5.000
901025	1,2-Dichloropropane	ug/l	ND	5.000
901025	1,4-Dichlorobenzene	ug/l	ND	10.000
901025	cis-1,2-Dichloroethene	ug/l	ND	10.000
901025	Phenols	mg/l	ND	0.050
901025	Phenols	mg/l	ND	0.050
901025	Tetrachloroethene	ug/l	ND	5.000
901025	Toluene	ug/l	ND	5.000
901025	Xylene (Total)	ug/l	10.00	10.000

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

EU4R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890817	1,1,1-Trichloroethane	ug/l	ND	5.000
900620	1,1,1-Trichloroethane	ug/l	ND	5.000
901025	1,1,1-Trichloroethane	ug/l	ND	5.000
910314	1,1,1-Trichloroethane	ug/l	ND	5.000
910823	1,1,1-Trichloroethane	ug/l	ND	5.000
920325	1,1,1-Trichloroethane	ug/l	ND	5.000
890817	1,2-Dichloroethane	ug/l	ND	5.000
900620	1,2-Dichloroethane	ug/l	ND	5.000
901025	1,2-Dichloroethane	ug/l	ND	5.000
910314	1,2-Dichloroethane	ug/l	ND	5.000
910823	1,2-Dichloroethane	ug/l	ND	5.000
920325	1,2-Dichloroethane	ug/l	ND	5.000
890817	1,2-Dichloropropane	ug/l	ND	5.000
900620	1,2-Dichloropropane	ug/l	ND	5.000
901025	1,2-Dichloropropane	ug/l	ND	5.000
910314	1,2-Dichloropropane	ug/l	ND	5.000
910823	1,2-Dichloropropane	ug/l	ND	5.000
920325	1,2-Dichloropropane	ug/l	ND	5.000
890817	1,4-Dichlorobenzene	ug/l	ND	10.000
900620	1,4-Dichlorobenzene	ug/l	ND	10.000
901025	1,4-Dichlorobenzene	ug/l	ND	10.000
910314	1,4-Dichlorobenzene	ug/l	ND	10.000
910823	1,4-Dichlorobenzene	ug/l	ND	10.000
920325	1,4-Dichlorobenzene	ug/l	ND	10.000
900620	cis-1,2-Dichloroethene	ug/l	ND	10.000
901025	cis-1,2-Dichloroethene	ug/l	ND	10.000
910314	cis-1,2-Dichloroethene	ug/l	ND	10.000
910823	cis-1,2-Dichloroethene	ug/l	ND	10.000
920325	cis-1,2-Dichloroethene	ug/l	ND	10.000
890817	Phenols	mg/l	ND	0.050
890817	Phenols	mg/l	ND	0.050
890817	Phenols	mg/l	ND	0.050
890817	Phenols	mg/l	ND	0.050
901025	Phenols	mg/l	ND	0.050
901025	Phenols	mg/l	ND	0.050
910823	Phenols	mg/l	ND	0.050
910823	Phenols	mg/l	ND	0.050
900620	Tetrachloroethene	ug/l	ND	5.000
901025	Tetrachloroethene	ug/l	ND	5.000
910314	Tetrachloroethene	ug/l	ND	5.000
910823	Tetrachloroethene	ug/l	ND	5.000
920325	Tetrachloroethene	ug/l	ND	5.000
890817	Toluene	ug/l	ND	5.000
900620	Toluene	ug/l	ND	5.000
901025	Toluene	ug/l	ND	5.000
910314	Toluene	ug/l	ND	5.000
910823	Toluene	ug/l	ND	5.000
920325	Toluene	ug/l	ND	5.000
900620	Xylene (Total)	ug/l	10.00	10.000
901025	Xylene (Total)	ug/l	10.00	10.000
910314	Xylene (Total)	ug/l	10.00	10.000
910823	Xylene (Total)	ug/l	10.00	10.000
920325	Xylene (Total)	ug/l	10.00	10.000

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED5R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890816	1,1,1-Trichloroethane	ug/l	ND	5.000
900621	1,1,1-Trichloroethane	ug/l	ND	5.000
901025	1,1,1-Trichloroethane	ug/l	ND	71.40
910314	1,1,1-Trichloroethane	ug/l	ND	50.00
910826	1,1,1-Trichloroethane	ug/l	ND	12.50
920326	1,1,1-Trichloroethane	ug/l	ND	50.00
890816	1,2-Dichloroethane	ug/l	ND	5.000
900621	1,2-Dichloroethane	ug/l	ND	5.000
901025	1,2-Dichloroethane	ug/l	ND	71.40
910314	1,2-Dichloroethane	ug/l	ND	50.00
910826	1,2-Dichloroethane	ug/l	ND	12.50
920326	1,2-Dichloroethane	ug/l	ND	50.00
890816	1,2-Dichloropropane	ug/l	ND	5.000
900621	1,2-Dichloropropane	ug/l	ND	5.000
901025	1,2-Dichloropropane	ug/l	ND	71.40
910314	1,2-Dichloropropane	ug/l	ND	50.00
910826	1,2-Dichloropropane	ug/l	ND	12.50
920326	1,2-Dichloropropane	ug/l	ND	50.00
890816	1,4-Dichlorobenzene	ug/l	ND	10.000
900621	1,4-Dichlorobenzene	ug/l	ND	10.000
901025	1,4-Dichlorobenzene	ug/l	ND	71.40
910314	1,4-Dichlorobenzene	ug/l	ND	50.00
910826	1,4-Dichlorobenzene	ug/l	ND	12.50
920326	1,4-Dichlorobenzene	ug/l	ND	50.00
900621	cis-1,2-Dichloroethene	ug/l	ND	10.000
901025	cis-1,2-Dichloroethene	ug/l	ND	71.40
910314	cis-1,2-Dichloroethene	ug/l	ND	50.00
910826	cis-1,2-Dichloroethene	ug/l	ND	12.50
920326	cis-1,2-Dichloroethene	ug/l	ND	50.00
890816	Phenols	mg/l	ND	0.050
890816	Phenols	mg/l	ND	0.050
901025	Phenols	mg/l	ND	0.050
901025	Phenols	mg/l	ND	0.050
910826	Phenols	mg/l	ND	0.050
910826	Phenols	mg/l	ND	0.050
890816	Tetrachloroethene	ug/l	ND	5.000
900621	Tetrachloroethene	ug/l	ND	5.000
901025	Tetrachloroethene	ug/l	ND	71.40
910314	Tetrachloroethene	ug/l	ND	50.00
910826	Tetrachloroethene	ug/l	ND	12.50
920326	Tetrachloroethene	ug/l	ND	50.00
890816	Toluene	ug/l	ND	5.000
900621	Toluene	ug/l	ND	5.000
901025	Toluene	ug/l	ND	71.40
910314	Toluene	ug/l	ND	50.00
910826	Toluene	ug/l	ND	12.50
920326	Toluene	ug/l	ND	50.00
900621	Xylene (Total)	ug/l	10.00	10.000
901025	Xylene (Total)	ug/l	71.40	71.40
910314	Xylene (Total)	ug/l	50.00	50.00
910826	Xylene (Total)	ug/l	12.50	12.50
920326	Xylene (Total)	ug/l	50.00	50.00

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

EU05

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890823	1,1,1-Trichloroethane	ug/l	ND	5.000
900621	1,1,1-Trichloroethane	ug/l	ND	5.000
901026	1,1,1-Trichloroethane	ug/l	ND	5.000
910314	1,1,1-Trichloroethane	ug/l	ND	5.000
910823	1,1,1-Trichloroethane	ug/l	ND	5.000
890823	1,2-Dichloroethane	ug/l	ND	5.000
900621	1,2-Dichloroethane	ug/l	ND	5.000
901026	1,2-Dichloroethane	ug/l	ND	5.000
910314	1,2-Dichloroethane	ug/l	ND	5.000
910823	1,2-Dichloroethane	ug/l	ND	5.000
890823	1,2-Dichloropropane	ug/l	ND	5.000
900621	1,2-Dichloropropane	ug/l	ND	5.000
901026	1,2-Dichloropropane	ug/l	ND	5.000
910314	1,2-Dichloropropane	ug/l	ND	5.000
910823	1,2-Dichloropropane	ug/l	ND	5.000
890823	1,4-Dichlorobenzene	ug/l	ND	10.000
900621	1,4-Dichlorobenzene	ug/l	ND	10.000
901026	1,4-Dichlorobenzene	ug/l	ND	10.000
910314	1,4-Dichlorobenzene	ug/l	ND	10.000
910823	1,4-Dichlorobenzene	ug/l	ND	10.000
900621	cis-1,2-Dichloroethene	ug/l	ND	10.000
901026	cis-1,2-Dichloroethene	ug/l	ND	10.000
910314	cis-1,2-Dichloroethene	ug/l	ND	10.000
910823	cis-1,2-Dichloroethene	ug/l	ND	10.000
890823	Phenols	mg/l	ND	0.050
890823	Phenols	mg/l	ND	0.050
890823	Phenols	mg/l	ND	0.050
890823	Phenols	mg/l	ND	0.050
901026	Phenols	mg/l	ND	0.050
901026	Phenols	mg/l	ND	0.050
910823	Phenols	mg/l	ND	0.050
910823	Phenols	mg/l	ND	0.050
900621	Tetrachloroethene	ug/l	ND	5.000
901026	Tetrachloroethene	ug/l	ND	5.000
910314	Tetrachloroethene	ug/l	ND	5.000
910823	Tetrachloroethene	ug/l	ND	5.000
890823	Toluene	ug/l	ND	5.000
900621	Toluene	ug/l	ND	5.000
901026	Toluene	ug/l	ND	5.000
910314	Toluene	ug/l	ND	5.000
910823	Toluene	ug/l	ND	5.000
900621	Xylene (Total)	ug/l	10.00	10.000
901026	Xylene (Total)	ug/l	10.00	10.000
910314	Xylene (Total)	ug/l	10.00	10.000
910823	Xylene (Total)	ug/l	10.00	10.000

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED6R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890818	1,1,1-Trichloroethane	ug/l	ND	5.000
900621	1,1,1-Trichloroethane	ug/l	ND	5.000
901026	1,1,1-Trichloroethane	ug/l	ND	20.00
910313	1,1,1-Trichloroethane	ug/l	ND	40.00
910822	1,1,1-Trichloroethane	ug/l	ND	35.70
920325	1,1,1-Trichloroethane	ug/l	ND	25.00
890818	1,2-Dichloroethane	ug/l	ND	5.000
900621	1,2-Dichloroethane	ug/l	ND	5.000
901026	1,2-Dichloroethane	ug/l	ND	20.00
910313	1,2-Dichloroethane	ug/l	ND	40.00
910822	1,2-Dichloroethane	ug/l	ND	35.70
920325	1,2-Dichloroethane	ug/l	ND	25.00
890818	1,2-Dichloropropane	ug/l	ND	5.000
900621	1,2-Dichloropropane	ug/l	ND	5.000
901026	1,2-Dichloropropane	ug/l	ND	20.00
910313	1,2-Dichloropropane	ug/l	ND	40.00
910822	1,2-Dichloropropane	ug/l	ND	35.70
920325	1,2-Dichloropropane	ug/l	ND	25.00
890818	1,4-Dichlorobenzene	ug/l	ND	10.000
900621	1,4-Dichlorobenzene	ug/l	ND	10.000
901026	1,4-Dichlorobenzene	ug/l	ND	20.00
910313	1,4-Dichlorobenzene	ug/l	ND	40.00
910822	1,4-Dichlorobenzene	ug/l	ND	35.70
920325	1,4-Dichlorobenzene	ug/l	ND	25.00
900621	cis-1,2-Dichloroethene	ug/l	ND	10.000
901026	cis-1,2-Dichloroethene	ug/l	ND	20.00
910313	cis-1,2-Dichloroethene	ug/l	ND	40.00
910822	cis-1,2-Dichloroethene	ug/l	ND	35.70
920325	cis-1,2-Dichloroethene	ug/l	ND	25.00
890818	Phenols	mg/l	ND	0.050
890818	Phenols	mg/l	ND	0.050
890818	Phenols	mg/l	ND	0.050
890818	Phenols	mg/l	ND	0.050
901026	Phenols	mg/l	ND	0.050
901026	Phenols	mg/l	ND	0.050
910822	Phenols	mg/l	ND	0.050
910822	Phenols	mg/l	ND	0.050
900621	Tetrachloroethene	ug/l	ND	5.000
901026	Tetrachloroethene	ug/l	ND	20.00
910313	Tetrachloroethene	ug/l	ND	40.00
910822	Tetrachloroethene	ug/l	ND	35.70
920325	Tetrachloroethene	ug/l	ND	25.00
890818	Toluene	ug/l	ND	5.000
900621	Toluene	ug/l	ND	5.000
901026	Toluene	ug/l	ND	20.00
910313	Toluene	ug/l	ND	40.00
910822	Toluene	ug/l	ND	35.70
920325	Toluene	ug/l	ND	25.00
900621	Xylene (Total)	ug/l	10.00	10.000
901026	Xylene (Total)	ug/l	20.00	20.00
910313	Xylene (Total)	ug/l	40.00	40.00
910822	Xylene (Total)	ug/l	35.70	35.70
920325	Xylene (Total)	ug/l	25.00	25.00

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED6S

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890818	1,1,1-Trichloroethane	ug/l		5.000
890818	1,2-Dichloroethane	ug/l		5.000
890818	1,2-Dichloropropane	ug/l		5.000
890818	1,4-Dichlorobenzene	ug/l		10.000
890818	Phenols	mg/l		0.050
890818	Phenols	mg/l		0.050
890818	Toluene	ug/l		5.000

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED7R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890817	1,1,1-Trichloroethane	ug/l	ND	5.000
900621	1,1,1-Trichloroethane	ug/l	ND	5.000
901030	1,1,1-Trichloroethane	ug/l	ND	5.000
910313	1,1,1-Trichloroethane	ug/l	ND	5.000
910821	1,1,1-Trichloroethane	ug/l	ND	5.000
920326	1,1,1-Trichloroethane	ug/l	ND	5.000
890817	1,2-Dichloroethane	ug/l	ND	5.000
900621	1,2-Dichloroethane	ug/l	ND	5.000
901030	1,2-Dichloroethane	ug/l	ND	5.000
910313	1,2-Dichloroethane	ug/l	ND	5.000
910821	1,2-Dichloroethane	ug/l	ND	5.000
920326	1,2-Dichloroethane	ug/l	ND	5.000
890817	1,2-Dichloropropane	ug/l	ND	5.000
900621	1,2-Dichloropropane	ug/l	ND	5.000
901030	1,2-Dichloropropane	ug/l	ND	5.000
910313	1,2-Dichloropropane	ug/l	ND	5.000
910821	1,2-Dichloropropane	ug/l	ND	5.000
920326	1,2-Dichloropropane	ug/l	ND	5.000
890817	1,4-Dichlorobenzene	ug/l	ND	10.000
900621	1,4-Dichlorobenzene	ug/l	ND	10.000
901030	1,4-Dichlorobenzene	ug/l	ND	10.000
910313	1,4-Dichlorobenzene	ug/l	ND	10.000
910821	1,4-Dichlorobenzene	ug/l	ND	10.000
920326	1,4-Dichlorobenzene	ug/l	ND	10.000
900621	cis-1,2-Dichloroethene	ug/l	ND	10.000
901030	cis-1,2-Dichloroethene	ug/l	ND	10.000
910313	cis-1,2-Dichloroethene	ug/l	ND	10.000
910821	cis-1,2-Dichloroethene	ug/l	ND	10.000
920326	cis-1,2-Dichloroethene	ug/l	ND	10.000
890817	Phenols	mg/l	ND	0.050
890817	Phenols	mg/l	ND	0.050
890817	Phenols	mg/l	ND	0.050
890817	Phenols	mg/l	ND	0.050
901030	Phenols	mg/l	ND	0.050
901030	Phenols	mg/l	ND	0.050
910821	Phenols	mg/l	ND	0.050
910821	Phenols	mg/l	ND	0.050
900621	Tetrachloroethene	ug/l	ND	5.000
901030	Tetrachloroethene	ug/l	ND	5.000
910313	Tetrachloroethene	ug/l	ND	5.000
910821	Tetrachloroethene	ug/l	ND	5.000
920326	Tetrachloroethene	ug/l	ND	5.000
890817	Toluene	ug/l	ND	5.000
900621	Toluene	ug/l	ND	5.000
901030	Toluene	ug/l	ND	5.000
910313	Toluene	ug/l	ND	5.000
910821	Toluene	ug/l	ND	5.000
920326	Toluene	ug/l	ND	5.000
900621	Xylene (Total)	ug/l	10.00	10.000
901030	Xylene (Total)	ug/l	10.00	10.000
910313	Xylene (Total)	ug/l	10.00	10.000
910821	Xylene (Total)	ug/l	10.00	10.000
920326	Xylene (Total)	ug/l	10.00	10.000

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED7S

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890823	1,1,1-Trichloroethane	ug/l		5.000
890823	1,2-Dichloroethane	ug/l		5.000
890823	1,2-Dichloropropane	ug/l		5.000
890823	1,4-Dichlorobenzene	ug/l		10.000
890823	Phenols	mg/l		0.050
890823	Phenols	mg/l		0.050
890823	Toluene	ug/l		5.000

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED8R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890817	1,1,1-Trichloroethane	ug/l	ND	5.000
900620	1,1,1-Trichloroethane	ug/l	ND	50.00
901025	1,1,1-Trichloroethane	ug/l	ND	25.00
910314	1,1,1-Trichloroethane	ug/l	ND	40.00
910821	1,1,1-Trichloroethane	ug/l	ND	20.00
920327	1,1,1-Trichloroethane	ug/l	ND	20.00
890817	1,2-Dichloroethane	ug/l	ND	5.000
900620	1,2-Dichloroethane	ug/l	ND	50.00
901025	1,2-Dichloroethane	ug/l	ND	25.00
910314	1,2-Dichloroethane	ug/l	ND	40.00
910821	1,2-Dichloroethane	ug/l	ND	20.00
920327	1,2-Dichloroethane	ug/l	ND	20.00
890817	1,2-Dichloropropane	ug/l	ND	5.000
900620	1,2-Dichloropropane	ug/l	ND	50.00
901025	1,2-Dichloropropane	ug/l	ND	25.00
910314	1,2-Dichloropropane	ug/l	ND	40.00
910821	1,2-Dichloropropane	ug/l	ND	20.00
920327	1,2-Dichloropropane	ug/l	ND	20.00
890817	1,4-Dichlorobenzene	ug/l	ND	10.000
900620	1,4-Dichlorobenzene	ug/l	ND	50.00
901025	1,4-Dichlorobenzene	ug/l	ND	25.00
910314	1,4-Dichlorobenzene	ug/l	ND	40.00
910821	1,4-Dichlorobenzene	ug/l	ND	20.00
920327	1,4-Dichlorobenzene	ug/l	ND	20.00
900620	cis-1,2-Dichloroethene	ug/l	ND	50.00
901025	cis-1,2-Dichloroethene	ug/l	ND	25.00
910314	cis-1,2-Dichloroethene	ug/l	ND	40.00
910821	cis-1,2-Dichloroethene	ug/l	ND	20.00
920327	cis-1,2-Dichloroethene	ug/l	ND	20.00
890817	Phenols	mg/l	ND	0.050
890817	Phenols	mg/l	ND	0.050
890817	Phenols	mg/l	ND	0.050
890817	Phenols	mg/l	ND	0.050
901025	Phenols	mg/l	ND	0.050
901025	Phenols	mg/l	ND	0.050
910821	Phenols	mg/l	ND	0.050
910821	Phenols	mg/l	ND	0.050
900620	Tetrachloroethene	ug/l	ND	50.00
901025	Tetrachloroethene	ug/l	ND	25.00
910314	Tetrachloroethene	ug/l	ND	40.00
910821	Tetrachloroethene	ug/l	ND	20.00
920327	Tetrachloroethene	ug/l	ND	20.00
890817	Toluene	ug/l	ND	5.000
900620	Toluene	ug/l	ND	50.00
901025	Toluene	ug/l	ND	25.00
910314	Toluene	ug/l	ND	40.00
910821	Toluene	ug/l	ND	20.00
920327	Toluene	ug/l	ND	20.00
900620	Xylene (Total)	ug/l	50.00	50.00
901025	Xylene (Total)	ug/l	25.00	25.00
910314	Xylene (Total)	ug/l	40.00	40.00
910821	Xylene (Total)	ug/l	20.00	20.00
920327	Xylene (Total)	ug/l	20.00	20.00

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED8S

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890817	1,1,1-Trichloroethane	ug/l		5.000
900620	1,1,1-Trichloroethane	ug/l	ND	5.000
901025	1,1,1-Trichloroethane	ug/l	ND	5.000
910314	1,1,1-Trichloroethane	ug/l	ND	5.000
890817	1,2-Dichloroethane	ug/l		5.000
900620	1,2-Dichloroethane	ug/l	ND	5.000
901025	1,2-Dichloroethane	ug/l	ND	5.000
910314	1,2-Dichloroethane	ug/l	ND	5.000
890817	1,2-Dichloropropane	ug/l		5.000
900620	1,2-Dichloropropane	ug/l	ND	5.000
901025	1,2-Dichloropropane	ug/l	ND	5.000
910314	1,2-Dichloropropane	ug/l	ND	5.000
890817	1,4-Dichlorobenzene	ug/l		10.000
900620	1,4-Dichlorobenzene	ug/l	ND	10.000
901025	1,4-Dichlorobenzene	ug/l	ND	10.000
910314	1,4-Dichlorobenzene	ug/l	ND	10.000
900620	cis-1,2-Dichloroethene	ug/l	ND	10.000
901025	cis-1,2-Dichloroethene	ug/l	ND	10.000
910314	cis-1,2-Dichloroethene	ug/l	ND	10.000
890817	Phenols	mg/l		0.050
890817	Phenols	mg/l		0.050
901025	Phenols	mg/l	ND	0.050
901025	Phenols	mg/l	ND	0.050
900620	Tetrachloroethene	ug/l	ND	5.000
901025	Tetrachloroethene	ug/l	ND	5.000
910314	Tetrachloroethene	ug/l	ND	5.000
890817	Toluene	ug/l		5.000
900620	Toluene	ug/l	ND	5.000
901025	Toluene	ug/l	ND	5.000
910314	Toluene	ug/l	ND	5.000
900620	Xylene (Total)	ug/l	10.00	10.000
901025	Xylene (Total)	ug/l	10.00	10.000
910314	Xylene (Total)	ug/l	10.00	10.000

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED9R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890818	1,1,1-Trichloroethane	ug/l	ND	5.000
900620	1,1,1-Trichloroethane	ug/l	ND	55.55
901025	1,1,1-Trichloroethane	ug/l	ND	5.000
910314	1,1,1-Trichloroethane	ug/l	ND	40.00
910822	1,1,1-Trichloroethane	ug/l	ND	25.00
920327	1,1,1-Trichloroethane	ug/l	ND	20.00
890818	1,2-Dichloroethane	ug/l	ND	5.000
900620	1,2-Dichloroethane	ug/l	ND	55.55
901025	1,2-Dichloroethane	ug/l	6.	5.000
910314	1,2-Dichloroethane	ug/l	ND	40.00
910822	1,2-Dichloroethane	ug/l	ND	25.00
920327	1,2-Dichloroethane	ug/l	ND	20.00
890818	1,2-Dichloropropane	ug/l	7.50	5.000
900620	1,2-Dichloropropane	ug/l	ND	55.55
901025	1,2-Dichloropropane	ug/l	ND	5.000
910314	1,2-Dichloropropane	ug/l	ND	40.00
910822	1,2-Dichloropropane	ug/l	ND	25.00
920327	1,2-Dichloropropane	ug/l	ND	20.00
890818	1,4-Dichlorobenzene	ug/l	ND	10.000
900620	1,4-Dichlorobenzene	ug/l	ND	55.55
901025	1,4-Dichlorobenzene	ug/l	ND	10.000
910314	1,4-Dichlorobenzene	ug/l	ND	40.00
910822	1,4-Dichlorobenzene	ug/l	ND	25.00
920327	1,4-Dichlorobenzene	ug/l	ND	20.00
900620	cis-1,2-Dichloroethene	ug/l	ND	55.55
901025	cis-1,2-Dichloroethene	ug/l	ND	10.000
910314	cis-1,2-Dichloroethene	ug/l	ND	40.00
910822	cis-1,2-Dichloroethene	ug/l	ND	25.00
920327	cis-1,2-Dichloroethene	ug/l	ND	20.00
890818	Phenols	mg/l	ND	0.050
890818	Phenols	mg/l	ND	0.050
890818	Phenols	mg/l	ND	0.050
890818	Phenols	mg/l	ND	0.050
901025	Phenols	mg/l	ND	0.050
901025	Phenols	mg/l	ND	0.050
910822	Phenols	mg/l	ND	0.050
910822	Phenols	mg/l	ND	0.050
900620	Tetrachloroethene	ug/l	ND	55.55
901025	Tetrachloroethene	ug/l	ND	5.000
910314	Tetrachloroethene	ug/l	ND	40.00
910822	Tetrachloroethene	ug/l	ND	25.00
920327	Tetrachloroethene	ug/l	ND	20.00
890818	Toluene	ug/l	ND	5.000
900620	Toluene	ug/l	ND	55.55
901025	Toluene	ug/l	ND	5.000
910314	Toluene	ug/l	ND	40.00
910822	Toluene	ug/l	ND	25.00
920327	Toluene	ug/l	ND	20.00
900620	Xylene (Total)	ug/l	55.55	55.55
901025	Xylene (Total)	ug/l	10.00	10.000
910314	Xylene (Total)	ug/l	40.00	40.00
910822	Xylene (Total)	ug/l	25.00	25.00
920327	Xylene (Total)	ug/l	20.00	20.00

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED11D

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890822	1,1,1-Trichloroethane	ug/l	ND	5.000
900619	1,1,1-Trichloroethane	ug/l	ND	5.000
901030	1,1,1-Trichloroethane	ug/l	ND	5.000
910313	1,1,1-Trichloroethane	ug/l	ND	7.50
910826	1,1,1-Trichloroethane	ug/l	ND	7.60
920325	1,1,1-Trichloroethane	ug/l	ND	10.00
890822	1,2-Dichloroethane	ug/l	ND	5.000
900619	1,2-Dichloroethane	ug/l	ND	5.000
901030	1,2-Dichloroethane	ug/l	ND	5.000
910313	1,2-Dichloroethane	ug/l	ND	7.50
910826	1,2-Dichloroethane	ug/l	ND	7.60
920325	1,2-Dichloroethane	ug/l	ND	10.00
890822	1,2-Dichloropropane	ug/l	ND	5.000
900619	1,2-Dichloropropane	ug/l	ND	5.000
901030	1,2-Dichloropropane	ug/l	ND	5.000
910313	1,2-Dichloropropane	ug/l	ND	7.50
910826	1,2-Dichloropropane	ug/l	ND	7.60
920325	1,2-Dichloropropane	ug/l	ND	10.00
890822	1,4-Dichlorobenzene	ug/l	ND	10.000
900619	1,4-Dichlorobenzene	ug/l	ND	10.000
901030	1,4-Dichlorobenzene	ug/l	ND	10.000
910313	1,4-Dichlorobenzene	ug/l	ND	10.00
910826	1,4-Dichlorobenzene	ug/l	ND	10.00
920325	1,4-Dichlorobenzene	ug/l	ND	10.00
900619	cis-1,2-Dichloroethene	ug/l	ND	10.000
901030	cis-1,2-Dichloroethene	ug/l	ND	10.000
910313	cis-1,2-Dichloroethene	ug/l	ND	10.00
910826	cis-1,2-Dichloroethene	ug/l	ND	10.00
920325	cis-1,2-Dichloroethene	ug/l	ND	10.00
890822	Phenols	mg/l	ND	0.050
890822	Phenols	mg/l	ND	0.050
901030	Phenols	mg/l	ND	0.050
901030	Phenols	mg/l	ND	0.050
910826	Phenols	mg/l	ND	0.050
910826	Phenols	mg/l	ND	0.050
890822	Tetrachloroethene	ug/l	ND	5.000
900619	Tetrachloroethene	ug/l	ND	5.000
901030	Tetrachloroethene	ug/l	ND	5.000
910313	Tetrachloroethene	ug/l	ND	7.50
910826	Tetrachloroethene	ug/l	ND	7.60
920325	Tetrachloroethene	ug/l	ND	10.00
890822	Toluene	ug/l	ND	5.000
900619	Toluene	ug/l	ND	5.000
901030	Toluene	ug/l	ND	5.000
910313	Toluene	ug/l	ND	7.50
910826	Toluene	ug/l	ND	7.60
920325	Toluene	ug/l	ND	10.00
900619	Xylene (Total)	ug/l	10.00	10.000
901030	Xylene (Total)	ug/l	10.00	10.000
910313	Xylene (Total)	ug/l	10.00	10.00
910826	Xylene (Total)	ug/l	10.00	10.00
920325	Xylene (Total)	ug/l	10.00	10.00

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED12D

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890822	1,1,1-Trichloroethane	ug/l	ND	100.00
900621	1,1,1-Trichloroethane	ug/l	ND	125.00
901030	1,1,1-Trichloroethane	ug/l	ND	40.00
910313	1,1,1-Trichloroethane	ug/l	ND	5.000
910821	1,1,1-Trichloroethane	ug/l	ND	90.90
920326	1,1,1-Trichloroethane	ug/l	ND	75.00
890822	1,2-Dichloroethane	ug/l	ND	100.00
900621	1,2-Dichloroethane	ug/l	ND	125.00
901030	1,2-Dichloroethane	ug/l	ND	40.00
910313	1,2-Dichloroethane	ug/l	ND	5.000
910821	1,2-Dichloroethane	ug/l	ND	90.90
920326	1,2-Dichloroethane	ug/l	240.	75.00
890822	1,2-Dichloropropane	ug/l	ND	100.00
900621	1,2-Dichloropropane	ug/l	ND	125.00
901030	1,2-Dichloropropane	ug/l	ND	40.00
910313	1,2-Dichloropropane	ug/l	ND	5.000
910821	1,2-Dichloropropane	ug/l	ND	90.90
920326	1,2-Dichloropropane	ug/l	ND	75.00
890822	1,4-Dichlorobenzene	ug/l	ND	100.00
900621	1,4-Dichlorobenzene	ug/l	ND	125.00
901030	1,4-Dichlorobenzene	ug/l	ND	40.00
910313	1,4-Dichlorobenzene	ug/l	ND	10.000
910821	1,4-Dichlorobenzene	ug/l	ND	90.90
920326	1,4-Dichlorobenzene	ug/l	ND	75.00
900621	cis-1,2-Dichloroethene	ug/l	ND	125.00
901030	cis-1,2-Dichloroethene	ug/l	ND	40.00
910313	cis-1,2-Dichloroethene	ug/l	ND	10.000
910821	cis-1,2-Dichloroethene	ug/l	ND	90.90
920326	cis-1,2-Dichloroethene	ug/l	82.	75.00
890822	Phenols	mg/l	ND	0.25
890822	Phenols	mg/l	ND	0.25
901030	Phenols	mg/l	0.086	0.050
901030	Phenols	mg/l	0.086	0.050
910821	Phenols	mg/l	ND	0.050
910821	Phenols	mg/l	ND	0.050
890822	Tetrachloroethene	ug/l	ND	100.00
900621	Tetrachloroethene	ug/l	ND	125.00
901030	Tetrachloroethene	ug/l	ND	40.00
910313	Tetrachloroethene	ug/l	ND	5.000
910821	Tetrachloroethene	ug/l	ND	90.90
920326	Tetrachloroethene	ug/l	ND	75.00
890822	Toluene	ug/l	788.60	100.00
900621	Toluene	ug/l	950.	125.00
901030	Toluene	ug/l	240.	40.00
910313	Toluene	ug/l	530.	5.000
910821	Toluene	ug/l	520.	90.90
920326	Toluene	ug/l	130.	75.00
900621	Xylene (Total)	ug/l	125.00	125.00
901030	Xylene (Total)	ug/l	40.00	40.00
910313	Xylene (Total)	ug/l	10.00	10.000
910821	Xylene (Total)	ug/l	90.90	90.90
920326	Xylene (Total)	ug/l	75.00	75.00

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED12I

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890822	1,1,1-Trichloroethane	ug/l	ND	5.000
900621	1,1,1-Trichloroethane	ug/l	ND	5.000
901030	1,1,1-Trichloroethane	ug/l	ND	5.000
910313	1,1,1-Trichloroethane	ug/l	ND	5.000
910821	1,1,1-Trichloroethane	ug/l	ND	5.000
920326	1,1,1-Trichloroethane	ug/l	ND	5.000
890822	1,2-Dichloroethane	ug/l	ND	5.000
900621	1,2-Dichloroethane	ug/l	ND	5.000
901030	1,2-Dichloroethane	ug/l	ND	5.000
910313	1,2-Dichloroethane	ug/l	ND	5.000
910821	1,2-Dichloroethane	ug/l	ND	5.000
920326	1,2-Dichloroethane	ug/l	ND	5.000
890822	1,2-Dichloropropane	ug/l	ND	5.000
900621	1,2-Dichloropropane	ug/l	ND	5.000
901030	1,2-Dichloropropane	ug/l	ND	5.000
910313	1,2-Dichloropropane	ug/l	ND	5.000
910821	1,2-Dichloropropane	ug/l	ND	5.000
920326	1,2-Dichloropropane	ug/l	ND	5.000
890822	1,4-Dichlorobenzene	ug/l	ND	10.000
900621	1,4-Dichlorobenzene	ug/l	ND	10.000
901030	1,4-Dichlorobenzene	ug/l	ND	10.000
910313	1,4-Dichlorobenzene	ug/l	ND	10.000
910821	1,4-Dichlorobenzene	ug/l	ND	10.000
920326	1,4-Dichlorobenzene	ug/l	ND	10.000
900621	cis-1,2-Dichloroethene	ug/l	ND	10.000
901030	cis-1,2-Dichloroethene	ug/l	ND	10.000
910313	cis-1,2-Dichloroethene	ug/l	ND	10.000
910821	cis-1,2-Dichloroethene	ug/l	ND	10.000
920326	cis-1,2-Dichloroethene	ug/l	ND	10.000
890822	Phenols	mg/l	ND	0.050
890822	Phenols	mg/l	ND	0.050
901030	Phenols	mg/l	ND	0.050
901030	Phenols	mg/l	ND	0.050
910821	Phenols	mg/l	ND	0.050
910821	Phenols	mg/l	ND	0.050
890822	Tetrachloroethene	ug/l	ND	5.000
900621	Tetrachloroethene	ug/l	ND	5.000
901030	Tetrachloroethene	ug/l	ND	5.000
910313	Tetrachloroethene	ug/l	ND	5.000
910821	Tetrachloroethene	ug/l	ND	5.000
920326	Tetrachloroethene	ug/l	ND	5.000
890822	Toluene	ug/l	ND	5.000
900621	Toluene	ug/l	6.	5.000
901030	Toluene	ug/l	ND	5.000
910313	Toluene	ug/l	13.	5.000
910821	Toluene	ug/l	30.	5.000
920326	Toluene	ug/l	32.	5.000
900621	Xylene (Total)	ug/l	10.00	10.000
901030	Xylene (Total)	ug/l	10.00	10.000
910313	Xylene (Total)	ug/l	10.00	10.000
910821	Xylene (Total)	ug/l	10.00	10.000
920326	Xylene (Total)	ug/l	10.00	10.000

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED12S

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890822	1,1,1-Trichloroethane	ug/l	ND	5.000
900621	1,1,1-Trichloroethane	ug/l	ND	5.000
901030	1,1,1-Trichloroethane	ug/l	ND	5.000
910313	1,1,1-Trichloroethane	ug/l	ND	5.000
910821	1,1,1-Trichloroethane	ug/l	ND	5.000
920326	1,1,1-Trichloroethane	ug/l	ND	5.000
890822	1,2-Dichloroethane	ug/l	ND	5.000
900621	1,2-Dichloroethane	ug/l	ND	5.000
901030	1,2-Dichloroethane	ug/l	ND	5.000
910313	1,2-Dichloroethane	ug/l	ND	5.000
910821	1,2-Dichloroethane	ug/l	ND	5.000
920326	1,2-Dichloroethane	ug/l	ND	5.000
890822	1,2-Dichloropropane	ug/l	ND	5.000
900621	1,2-Dichloropropane	ug/l	ND	5.000
901030	1,2-Dichloropropane	ug/l	ND	5.000
910313	1,2-Dichloropropane	ug/l	ND	5.000
910821	1,2-Dichloropropane	ug/l	ND	5.000
920326	1,2-Dichloropropane	ug/l	ND	5.000
890822	1,4-Dichlorobenzene	ug/l	ND	10.000
900621	1,4-Dichlorobenzene	ug/l	ND	10.000
901030	1,4-Dichlorobenzene	ug/l	ND	10.000
910313	1,4-Dichlorobenzene	ug/l	ND	10.000
910821	1,4-Dichlorobenzene	ug/l	ND	10.000
920326	1,4-Dichlorobenzene	ug/l	ND	10.000
901030	cis-1,2-Dichloroethene	ug/l	ND	10.000
910313	cis-1,2-Dichloroethene	ug/l	ND	10.000
910621	cis-1,2-Dichloroethene	ug/l	ND	10.000
910821	cis-1,2-Dichloroethene	ug/l	ND	10.000
920326	cis-1,2-Dichloroethene	ug/l	ND	10.000
890822	Phenols	mg/l	ND	0.050
890822	Phenols	mg/l	ND	0.050
901030	Phenols	mg/l	ND	0.050
901030	Phenols	mg/l	ND	0.050
910821	Phenols	mg/l	ND	0.050
910821	Phenols	mg/l	ND	0.050
890822	Tetrachloroethene	ug/l	ND	5.000
900621	Tetrachloroethene	ug/l	ND	5.000
901030	Tetrachloroethene	ug/l	ND	5.000
910313	Tetrachloroethene	ug/l	ND	5.000
910821	Tetrachloroethene	ug/l	ND	5.000
920326	Tetrachloroethene	ug/l	ND	5.000
890822	Toluene	ug/l	ND	5.000
900621	Toluene	ug/l	ND	5.000
901030	Toluene	ug/l	ND	5.000
910313	Toluene	ug/l	ND	5.000
910821	Toluene	ug/l	ND	5.000
920326	Toluene	ug/l	ND	5.000
900621	Xylene (Total)	ug/l	10.00	10.000
901030	Xylene (Total)	ug/l	10.00	10.000
910313	Xylene (Total)	ug/l	10.00	10.000
910821	Xylene (Total)	ug/l	10.00	10.000
920326	Xylene (Total)	ug/l	10.00	10.000

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED13D

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890818	1,1,1-Trichloroethane	ug/l	74.92	20.00
900619	1,1,1-Trichloroethane	ug/l	66.	20.00
901025	1,1,1-Trichloroethane	ug/l	ND	17.85
910314	1,1,1-Trichloroethane	ug/l	71.	25.00
910822	1,1,1-Trichloroethane	ug/l	77.	25.00
920327	1,1,1-Trichloroethane	ug/l	ND	25.00
890818	1,2-Dichloroethane	ug/l	ND	20.00
900619	1,2-Dichloroethane	ug/l	ND	20.00
901025	1,2-Dichloroethane	ug/l	ND	17.85
910314	1,2-Dichloroethane	ug/l	ND	25.00
910822	1,2-Dichloroethane	ug/l	ND	25.00
920327	1,2-Dichloroethane	ug/l	ND	25.00
890818	1,2-Dichloropropane	ug/l	ND	20.00
900619	1,2-Dichloropropane	ug/l	ND	20.00
901025	1,2-Dichloropropane	ug/l	ND	17.85
910314	1,2-Dichloropropane	ug/l	ND	25.00
910822	1,2-Dichloropropane	ug/l	ND	25.00
920327	1,2-Dichloropropane	ug/l	ND	25.00
890818	1,4-Dichlorobenzene	ug/l	ND	20.00
900619	1,4-Dichlorobenzene	ug/l	ND	20.00
901025	1,4-Dichlorobenzene	ug/l	ND	17.85
910314	1,4-Dichlorobenzene	ug/l	ND	25.00
910822	1,4-Dichlorobenzene	ug/l	ND	25.00
920327	1,4-Dichlorobenzene	ug/l	ND	25.00
900619	cis-1,2-Dichloroethene	ug/l	41.	20.00
901025	cis-1,2-Dichloroethene	ug/l	ND	17.85
910314	cis-1,2-Dichloroethene	ug/l	51.	25.00
910822	cis-1,2-Dichloroethene	ug/l	54.	25.00
920327	cis-1,2-Dichloroethene	ug/l	ND	25.00
890818	Phenols	mg/l	ND	0.050
890818	Phenols	mg/l	ND	0.050
901025	Phenols	mg/l	ND	0.050
901025	Phenols	mg/l	ND	0.050
910822	Phenols	mg/l	ND	0.050
910822	Phenols	mg/l	ND	0.050
890818	Tetrachloroethene	ug/l	ND	20.00
900619	Tetrachloroethene	ug/l	ND	20.00
901025	Tetrachloroethene	ug/l	ND	17.85
910314	Tetrachloroethene	ug/l	ND	25.00
910822	Tetrachloroethene	ug/l	ND	25.00
920327	Tetrachloroethene	ug/l	ND	25.00
890818	Toluene	ug/l	ND	20.00
900619	Toluene	ug/l	ND	20.00
901025	Toluene	ug/l	ND	17.85
910314	Toluene	ug/l	ND	25.00
910822	Toluene	ug/l	ND	25.00
920327	Toluene	ug/l	ND	25.00
900619	Xylene (Total)	ug/l	20.00	20.00
901025	Xylene (Total)	ug/l	17.85	17.85
910314	Xylene (Total)	ug/l	25.00	25.00
910822	Xylene (Total)	ug/l	25.00	25.00
920327	Xylene (Total)	ug/l	25.00	25.00

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED13I

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890823	1,1,1-Trichloroethane	ug/l	ND	5.000
900619	1,1,1-Trichloroethane	ug/l	5.	5.000
901025	1,1,1-Trichloroethane	ug/l	5.	5.000
910314	1,1,1-Trichloroethane	ug/l	8.	5.000
910822	1,1,1-Trichloroethane	ug/l	7.	5.000
920327	1,1,1-Trichloroethane	ug/l	6.	5.000
890823	1,2-Dichloroethane	ug/l	ND	5.000
900619	1,2-Dichloroethane	ug/l	ND	5.000
901025	1,2-Dichloroethane	ug/l	ND	5.000
910314	1,2-Dichloroethane	ug/l	ND	5.000
910822	1,2-Dichloroethane	ug/l	ND	5.000
920327	1,2-Dichloroethane	ug/l	ND	5.000
890823	1,2-Dichloropropane	ug/l	ND	5.000
900619	1,2-Dichloropropane	ug/l	ND	5.000
901025	1,2-Dichloropropane	ug/l	ND	5.000
910314	1,2-Dichloropropane	ug/l	ND	5.000
910822	1,2-Dichloropropane	ug/l	ND	5.000
920327	1,2-Dichloropropane	ug/l	ND	5.000
890823	1,4-Dichlorobenzene	ug/l	ND	10.000
900619	1,4-Dichlorobenzene	ug/l	ND	10.000
901025	1,4-Dichlorobenzene	ug/l	ND	10.000
910314	1,4-Dichlorobenzene	ug/l	ND	10.000
910822	1,4-Dichlorobenzene	ug/l	ND	10.000
920327	1,4-Dichlorobenzene	ug/l	ND	10.000
900619	cis-1,2-Dichloroethene	ug/l	ND	10.000
901025	cis-1,2-Dichloroethene	ug/l	ND	10.000
910314	cis-1,2-Dichloroethene	ug/l	ND	10.000
910822	cis-1,2-Dichloroethene	ug/l	ND	10.000
920327	cis-1,2-Dichloroethene	ug/l	ND	10.000
890823	Phenols	mg/l	ND	0.050
890823	Phenols	mg/l	ND	0.050
901025	Phenols	mg/l	ND	0.050
901025	Phenols	mg/l	ND	0.050
910822	Phenols	mg/l	ND	0.050
910822	Phenols	mg/l	ND	0.050
890823	Tetrachloroethene	ug/l	ND	5.000
900619	Tetrachloroethene	ug/l	ND	5.000
901025	Tetrachloroethene	ug/l	ND	5.000
910314	Tetrachloroethene	ug/l	ND	5.000
910822	Tetrachloroethene	ug/l	ND	5.000
920327	Tetrachloroethene	ug/l	ND	5.000
890823	Toluene	ug/l	ND	5.000
900619	Toluene	ug/l	ND	5.000
901025	Toluene	ug/l	ND	5.000
910314	Toluene	ug/l	ND	5.000
910822	Toluene	ug/l	ND	5.000
920327	Toluene	ug/l	ND	5.000
900619	Xylene (Total)	ug/l	10.00	10.000
901025	Xylene (Total)	ug/l	10.00	10.000
910314	Xylene (Total)	ug/l	10.00	10.000
910822	Xylene (Total)	ug/l	10.00	10.000
920327	Xylene (Total)	ug/l	10.00	10.000

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED13S

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890824	1,1,1-Trichloroethane	ug/l	ND	5.000
920327	1,1,1-Trichloroethane	ug/l	ND	5.000
890824	1,2-Dichloroethane	ug/l	ND	5.000
920327	1,2-Dichloroethane	ug/l	ND	5.000
890824	1,2-Dichloropropane	ug/l	ND	5.000
920327	1,2-Dichloropropane	ug/l	ND	5.000
890824	1,4-Dichlorobenzene	ug/l	ND	10.000
920327	1,4-Dichlorobenzene	ug/l	ND	10.000
920327	cis-1,2-Dichloroethene	ug/l	ND	10.000
890824	Tetrachloroethene	ug/l	ND	5.000
920327	Tetrachloroethene	ug/l	ND	5.000
890824	Toluene	ug/l	ND	5.000
920327	Toluene	ug/l	ND	5.000
920327	Xylene (Total)	ug/l	10.00	10.000

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL MONITORING LABORATORY DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

EU14D

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
890823	1,1,1-Trichloroethane	ug/l	ND	5.000
900619	1,1,1-Trichloroethane	ug/l	ND	5.000
901025	1,1,1-Trichloroethane	ug/l	ND	5.000
910313	1,1,1-Trichloroethane	ug/l	ND	5.000
890823	1,2-Dichloroethane	ug/l	ND	5.000
900619	1,2-Dichloroethane	ug/l	ND	5.000
901025	1,2-Dichloroethane	ug/l	ND	5.000
910313	1,2-Dichloroethane	ug/l	ND	5.000
890823	1,2-Dichloropropane	ug/l	ND	5.000
900619	1,2-Dichloropropane	ug/l	ND	5.000
901025	1,2-Dichloropropane	ug/l	ND	5.000
910313	1,2-Dichloropropane	ug/l	ND	5.000
890823	1,4-Dichlorobenzene	ug/l	ND	10.000
900619	1,4-Dichlorobenzene	ug/l	ND	10.000
901025	1,4-Dichlorobenzene	ug/l	ND	10.000
910313	1,4-Dichlorobenzene	ug/l	ND	10.000
900619	cis-1,2-Dichloroethene	ug/l	ND	10.000
901025	cis-1,2-Dichloroethene	ug/l	ND	10.000
910313	cis-1,2-Dichloroethene	ug/l	ND	10.000
890823	Phenols	mg/l	ND	0.050
890823	Phenols	mg/l	ND	0.050
890823	Tetrachloroethene	ug/l	ND	5.000
900619	Tetrachloroethene	ug/l	ND	5.000
901025	Tetrachloroethene	ug/l	ND	5.000
910313	Tetrachloroethene	ug/l	ND	5.000
890823	Toluene	ug/l	ND	5.000
900619	Toluene	ug/l	ND	5.000
901025	Toluene	ug/l	ND	5.000
910313	Toluene	ug/l	ND	5.000
900619	Xylene (Total)	ug/l	10.00	10.000
901025	Xylene (Total)	ug/l	10.00	10.000
910313	Xylene (Total)	ug/l	10.00	10.000

APPENDIX E2

ENVIRONMENTAL TESTING & CERTIFICATION CORP.

Data Summary of Historical Results

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA
DATA SUMMARY OF HISTORICAL GROUNDWATER CHEMISTRY RESULTS

CONTAMINANT	UNITS	# OF SAMPLES COLLECTED	FREQUENCY OF DETECTION	# DETECTED ABOVE SQL	HIGHEST DETECTED CONC.	LOWEST DETECTED CONC. ABOVE DETECTION LIMIT	AVERAGE DETECTED CONC.
1,1,1-Trichloroethane	ug/l	184	13/184	13	130	0.76	7.80
1,2-Dichloroethane	ug/l	184	15/184	15	12.7	2.5	5.82
1,2-Dichloropropane	ug/l	145	15/145	15	6.3	6.3	8.59
Chromium	ug/l	100	5/100	5	30	8	7.49
m-Xylene	ug/l	62	0/62	0	NA	NA	10.19
o+p-Xylenes	ug/l	62	2/62	2	28.1	12.2	10.59
Tetrachloroethylene	ug/l	184	7/184	7	9.5	1.13	6.62
Toluene	ug/l	184	6/184	6	2400	12.3	31.60

NOTE:

NA - Not Applicable, contaminant has not been reported above the detection limit in this historical database.

AR303602

Historical Groundwater Chemistry Data

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED1R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860204	1,1,1-Trichloroethane	ug/l	ND	3.8
860626	1,1,1-Trichloroethane	ug/l	ND	3.8
860926	1,1,1-Trichloroethane	ug/l	ND	3.8
861223	1,1,1-Trichloroethane	ug/l	3.94	3.8
870313	1,1,1-Trichloroethane	ug/l	ND	3.8
870528	1,1,1-Trichloroethane	ug/l	5.07	3.8
870903	1,1,1-Trichloroethane	ug/l	5.85	3.8
871208	1,1,1-Trichloroethane	ug/l	ND	3.8
880301	1,1,1-Trichloroethane	ug/l	ND	3.8
880601	1,1,1-Trichloroethane	ug/l	2.74	3.8
880908	1,1,1-Trichloroethane	ug/l	ND	3.800
881130	1,1,1-Trichloroethane	ug/l	0.928	3.8
860204	1,2-Dichloroethane	ug/l	ND	2.8
860626	1,2-Dichloroethane	ug/l	ND	2.8
860926	1,2-Dichloroethane	ug/l	ND	2.8
861223	1,2-Dichloroethane	ug/l	ND	2.8
870313	1,2-Dichloroethane	ug/l	ND	2.8
870528	1,2-Dichloroethane	ug/l	ND	2.8
870903	1,2-Dichloroethane	ug/l	ND	2.8
871208	1,2-Dichloroethane	ug/l	ND	2.8
880301	1,2-Dichloroethane	ug/l	ND	2.8
880601	1,2-Dichloroethane	ug/l	ND	2.8
880908	1,2-Dichloroethane	ug/l	ND	2.800
881130	1,2-Dichloroethane	ug/l	ND	2.8
860204	1,2-Dichloropropane	ug/l	ND	6.0
860626	1,2-Dichloropropane	ug/l	ND	6.0
860926	1,2-Dichloropropane	ug/l	ND	6.0
861223	1,2-Dichloropropane	ug/l	ND	6.0
870313	1,2-Dichloropropane	ug/l	ND	6.0
870528	1,2-Dichloropropane	ug/l	ND	6.0
870903	1,2-Dichloropropane	ug/l	ND	6.0
871208	1,2-Dichloropropane	ug/l	ND	6.0
880301	1,2-Dichloropropane	ug/l	ND	6.0
860204	Chromium	ug/l	ND	10
860626	Chromium	ug/l	<	8
860926	Chromium	ug/l	<	8
861223	Chromium	ug/l	ND	16
870313	Chromium	ug/l	ND	24
870528	Chromium	ug/l	3.5	10
870903	Chromium	ug/l	ND	16
871208	Chromium	ug/l	ND	16
880301	Chromium	ug/l	ND	12
880601	m-Xylene	ug/l	ND	10
880908	m-Xylene	ug/l	ND	10.000
881130	m-Xylene	ug/l	ND	10
880601	o+p-Xylenes	ug/l	ND	10
880908	o+p-Xylenes	ug/l	ND	10.000
881130	o+p-Xylenes	ug/l	ND	10
860204	Tetrachloroethylene	ug/l	ND	4.1
860626	Tetrachloroethylene	ug/l	ND	4.1
860926	Tetrachloroethylene	ug/l	ND	4.1
861223	Tetrachloroethylene	ug/l	ND	4.1
870313	Tetrachloroethylene	ug/l	ND	4.1
870528	Tetrachloroethylene	ug/l	ND	4.1

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED1R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
870903	Tetrachloroethylene	ug/l	ND	4.1
871208	Tetrachloroethylene	ug/l	ND	4.1
880301	Tetrachloroethylene	ug/l	ND	4.1
880601	Tetrachloroethylene	ug/l	ND	4.1
880908	Tetrachloroethylene	ug/l	ND	4.100
881130	Tetrachloroethylene	ug/l	ND	4.1
860204	Toluene	ug/l	ND	6.0
860626	Toluene	ug/l	ND	6.0
860926	Toluene	ug/l	ND	6.0
861223	Toluene	ug/l	ND	6.0
870313	Toluene	ug/l	ND	6.0
870528	Toluene	ug/l	ND	6.0
870903	Toluene	ug/l	ND	6.0
871208	Toluene	ug/l	ND	6.0
880301	Toluene	ug/l	ND	6.0
880601	Toluene	ug/l	ND	6.0
880908	Toluene	ug/l	ND	6.000
881130	Toluene	ug/l	ND	6.0

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED1S

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860204	1,1,1-Trichloroethane	ug/l	ND	3.8
860626	1,1,1-Trichloroethane	ug/l	18.8	3.8
860926	1,1,1-Trichloroethane	ug/l	21.1	3.8
861223	1,1,1-Trichloroethane	ug/l	ND	3.8
870313	1,1,1-Trichloroethane	ug/l	19.4	3.8
870528	1,1,1-Trichloroethane	ug/l	11.4	3.8
870903	1,1,1-Trichloroethane	ug/l	ND	3.8
871208	1,1,1-Trichloroethane	ug/l	ND	3.8
880301	1,1,1-Trichloroethane	ug/l	ND	3.8
880601	1,1,1-Trichloroethane	ug/l	3.79	3.8
880908	1,1,1-Trichloroethane	ug/l	ND	3.800
881130	1,1,1-Trichloroethane	ug/l	ND	3.8
890307	1,1,1-Trichloroethane	ug/l	ND	0.76
860204	1,2-Dichloroethane	ug/l	ND	2.8
860626	1,2-Dichloroethane	ug/l	ND	2.8
860926	1,2-Dichloroethane	ug/l	ND	2.8
861223	1,2-Dichloroethane	ug/l	ND	2.8
870313	1,2-Dichloroethane	ug/l	ND	2.8
870528	1,2-Dichloroethane	ug/l	ND	2.8
870903	1,2-Dichloroethane	ug/l	ND	2.8
871208	1,2-Dichloroethane	ug/l	ND	2.8
880301	1,2-Dichloroethane	ug/l	ND	2.8
880601	1,2-Dichloroethane	ug/l	ND	2.8
880908	1,2-Dichloroethane	ug/l	ND	2.800
881130	1,2-Dichloroethane	ug/l	ND	2.8
890307	1,2-Dichloroethane	ug/l	ND	0.56
860204	1,2-Dichloropropane	ug/l	ND	6.0
860626	1,2-Dichloropropane	ug/l	ND	6.0
860926	1,2-Dichloropropane	ug/l	ND	6.0
861223	1,2-Dichloropropane	ug/l	ND	6.0
870313	1,2-Dichloropropane	ug/l	ND	6.0
870528	1,2-Dichloropropane	ug/l	ND	6.0
870903	1,2-Dichloropropane	ug/l	ND	6.0
871208	1,2-Dichloropropane	ug/l	ND	6.0
880301	1,2-Dichloropropane	ug/l	ND	6.0
890307	1,2-Dichloropropane	ug/l	ND	1.2
860204	Chromium	ug/l	ND	10
860626	Chromium	ug/l	<	8
860926	Chromium	ug/l	<	8
861223	Chromium	ug/l	ND	16
870313	Chromium	ug/l	ND	24
870528	Chromium	ug/l	ND	10
870903	Chromium	ug/l	ND	16
871208	Chromium	ug/l	ND	16
880301	Chromium	ug/l	2.8	12
880601	m-Xylene	ug/l	ND	10
880908	m-Xylene	ug/l	ND	10.000
881130	m-Xylene	ug/l	ND	10
890307	m-Xylene	ug/l	ND	2.0
880601	o+p-Xylenes	ug/l	ND	10
880908	o+p-Xylenes	ug/l	ND	10.000
881130	o+p-Xylenes	ug/l	ND	10
890307	o+p-Xylenes	ug/l	ND	2.0
860204	Tetrachloroethylene	ug/l	ND	4.1

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED1S

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860626	Tetrachloroethylene	ug/l	ND	4.1
860926	Tetrachloroethylene	ug/l	ND	4.1
861223	Tetrachloroethylene	ug/l	ND	4.1
870313	Tetrachloroethylene	ug/l	ND	4.1
870528	Tetrachloroethylene	ug/l	ND	4.1
870903	Tetrachloroethylene	ug/l	ND	4.1
871208	Tetrachloroethylene	ug/l	ND	4.1
880301	Tetrachloroethylene	ug/l	ND	4.1
880601	Tetrachloroethylene	ug/l	ND	4.1
880908	Tetrachloroethylene	ug/l	ND	4.100
881130	Tetrachloroethylene	ug/l	ND	4.1
890307	Tetrachloroethylene	ug/l	ND	0.82
860204	Toluene	ug/l	ND	6.0
860626	Toluene	ug/l	ND	6.0
860926	Toluene	ug/l	ND	6.0
861223	Toluene	ug/l	ND	6.0
870313	Toluene	ug/l	ND	6.0
870528	Toluene	ug/l	ND	6.0
870903	Toluene	ug/l	ND	6.0
871208	Toluene	ug/l	ND	6.0
880301	Toluene	ug/l	ND	6.0
880601	Toluene	ug/l	ND	6.0
880908	Toluene	ug/l	ND	6.000
881130	Toluene	ug/l	ND	6.0
890307	Toluene	ug/l	ND	1.2

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED2R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860131	1,1,1-Trichloroethane	ug/l	ND	3.8
860625	1,1,1-Trichloroethane	ug/l	ND	3.8
860925	1,1,1-Trichloroethane	ug/l	ND	3.8
861216	1,1,1-Trichloroethane	ug/l	ND	76
870313	1,1,1-Trichloroethane	ug/l	ND	3.8
870528	1,1,1-Trichloroethane	ug/l	ND	3.8
870903	1,1,1-Trichloroethane	ug/l	ND	3.8
871209	1,1,1-Trichloroethane	ug/l	ND	3.8
880302	1,1,1-Trichloroethane	ug/l	ND	3.8
880602	1,1,1-Trichloroethane	ug/l	ND	3.8
880913	1,1,1-Trichloroethane	ug/l	ND	38.000
881130	1,1,1-Trichloroethane	ug/l	ND	3.8
890310	1,1,1-Trichloroethane	ug/l	ND	38
860131	1,2-Dichloroethane	ug/l	ND	2.8
860625	1,2-Dichloroethane	ug/l	ND	2.8
860925	1,2-Dichloroethane	ug/l	ND	2.8
861216	1,2-Dichloroethane	ug/l	ND	56
870313	1,2-Dichloroethane	ug/l	ND	2.8
870528	1,2-Dichloroethane	ug/l	ND	2.8
870903	1,2-Dichloroethane	ug/l	ND	2.8
871209	1,2-Dichloroethane	ug/l	ND	2.8
880302	1,2-Dichloroethane	ug/l	ND	2.8
880602	1,2-Dichloroethane	ug/l	ND	2.8
880913	1,2-Dichloroethane	ug/l	ND	28.000
881130	1,2-Dichloroethane	ug/l	ND	2.8
890310	1,2-Dichloroethane	ug/l	ND	28
860131	1,2-Dichloropropane	ug/l	ND	6.0
860625	1,2-Dichloropropane	ug/l	ND	6.0
860925	1,2-Dichloropropane	ug/l	ND	6.0
861216	1,2-Dichloropropane	ug/l	ND	120
870313	1,2-Dichloropropane	ug/l	ND	6.0
870528	1,2-Dichloropropane	ug/l	ND	6.0
870903	1,2-Dichloropropane	ug/l	ND	6.0
871209	1,2-Dichloropropane	ug/l	ND	6.0
880302	1,2-Dichloropropane	ug/l	ND	6.0
890310	1,2-Dichloropropane	ug/l	ND	60
860131	Chromium	ug/l	7	10
860625	Chromium	ug/l	<	8
860925	Chromium	ug/l	18	8
861216	Chromium	ug/l	3.3	13
870313	Chromium	ug/l	7.4	24
870528	Chromium	ug/l	11	10
870903	Chromium	ug/l	ND	16
871209	Chromium	ug/l	7.9	13
880302	Chromium	ug/l	ND	20
880602	m-Xylene	ug/l	ND	10
880913	m-Xylene	ug/l	ND	100.000
881130	m-Xylene	ug/l	ND	10
890310	m-Xylene	ug/l	ND	100
880602	o+p-Xylenes	ug/l	12.2	10
880913	o+p-Xylenes	ug/l	ND	100.000
881130	o+p-Xylenes	ug/l	28.1	10
890310	o+p-Xylenes	ug/l	ND	100
860131	Tetrachloroethylene	ug/l	ND	4.1

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED2R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860625	Tetrachloroethylene	ug/l	ND	4.1
860925	Tetrachloroethylene	ug/l	ND	4.1
861216	Tetrachloroethylene	ug/l	ND	82
870313	Tetrachloroethylene	ug/l	ND	4.1
870528	Tetrachloroethylene	ug/l	ND	4.1
870903	Tetrachloroethylene	ug/l	ND	4.1
871209	Tetrachloroethylene	ug/l	ND	4.1
880302	Tetrachloroethylene	ug/l	ND	4.1
880602	Tetrachloroethylene	ug/l	ND	4.1
880913	Tetrachloroethylene	ug/l	ND	41.000
881130	Tetrachloroethylene	ug/l	ND	4.1
890310	Tetrachloroethylene	ug/l	ND	41
860131	Toluene	ug/l	17.6	6.0
860625	Toluene	ug/l	2.5	6.0
860925	Toluene	ug/l	12.3	6.0
861216	Toluene	ug/l	ND	120
870313	Toluene	ug/l	ND	6.0
870528	Toluene	ug/l	ND	6.0
870903	Toluene	ug/l	ND	6.0
871209	Toluene	ug/l	ND	6.0
880302	Toluene	ug/l	ND	6.0
880602	Toluene	ug/l	1.09	6.0
880913	Toluene	ug/l	209.000	60.000
881130	Toluene	ug/l	1.40	6.0
890310	Toluene	ug/l	ND	60

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED2S

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860131	1,1,1-Trichloroethane	ug/l	ND	3.8
861223	1,1,1-Trichloroethane	ug/l	ND	3.8
870313	1,1,1-Trichloroethane	ug/l	ND	3.8
871209	1,1,1-Trichloroethane	ug/l	ND	3.8
880302	1,1,1-Trichloroethane	ug/l	ND	3.8
880602	1,1,1-Trichloroethane	ug/l	ND	3.8
880913	1,1,1-Trichloroethane	ug/l	ND	3.800
881130	1,1,1-Trichloroethane	ug/l	ND	3.8
890310	1,1,1-Trichloroethane	ug/l	ND	0.76
860131	1,2-Dichloroethane	ug/l	ND	2.8
861223	1,2-Dichloroethane	ug/l	ND	2.8
870313	1,2-Dichloroethane	ug/l	ND	2.8
871209	1,2-Dichloroethane	ug/l	ND	2.8
880302	1,2-Dichloroethane	ug/l	ND	2.8
880602	1,2-Dichloroethane	ug/l	ND	2.8
880913	1,2-Dichloroethane	ug/l	ND	2.800
881130	1,2-Dichloroethane	ug/l	ND	2.8
890310	1,2-Dichloroethane	ug/l	ND	0.56
860131	1,2-Dichloropropane	ug/l	ND	6.0
861223	1,2-Dichloropropane	ug/l	ND	6.0
870313	1,2-Dichloropropane	ug/l	ND	6.0
871209	1,2-Dichloropropane	ug/l	ND	6.0
880302	1,2-Dichloropropane	ug/l	ND	6.0
890310	1,2-Dichloropropane	ug/l	ND	1.2
860131	Chromium	ug/l	5	10
851223	Chromium	ug/l	ND	16
870313	Chromium	ug/l	ND	24
871209	Chromium	ug/l	ND	13
880602	m-Xylene	ug/l	ND	10
880913	m-Xylene	ug/l	ND	10.000
881130	m-Xylene	ug/l	ND	10
890310	m-Xylene	ug/l	ND	2.0
880602	o+p-Xylenes	ug/l	1.84	10
880913	o+p-Xylenes	ug/l	ND	10.000
881130	o+p-Xylenes	ug/l	ND	10
890310	o+p-Xylenes	ug/l	ND	2.0
860131	Tetrachloroethylene	ug/l	ND	4.1
861223	Tetrachloroethylene	ug/l	ND	4.1
870313	Tetrachloroethylene	ug/l	ND	4.1
871209	Tetrachloroethylene	ug/l	ND	4.1
880302	Tetrachloroethylene	ug/l	ND	4.1
880602	Tetrachloroethylene	ug/l	ND	4.1
880913	Tetrachloroethylene	ug/l	ND	4.100
881130	Tetrachloroethylene	ug/l	ND	4.1
890310	Tetrachloroethylene	ug/l	ND	0.82
860131	Toluene	ug/l	ND	6.0
861223	Toluene	ug/l	ND	6.0
870313	Toluene	ug/l	ND	6.0
871209	Toluene	ug/l	ND	6.0
880302	Toluene	ug/l	ND	6.0
880602	Toluene	ug/l	1.43	6.0
880913	Toluene	ug/l	ND	6.000
881130	Toluene	ug/l	ND	6.0
890310	Toluene	ug/l	ND	1.2

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

EU4R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860129	1,1,1-Trichloroethane	ug/l	ND	3.8
860627	1,1,1-Trichloroethane	ug/l	ND	3.8
860925	1,1,1-Trichloroethane	ug/l	ND	3.8
861223	1,1,1-Trichloroethane	ug/l	ND	3.8
870317	1,1,1-Trichloroethane	ug/l	ND	3.8
870528	1,1,1-Trichloroethane	ug/l	ND	3.8
870903	1,1,1-Trichloroethane	ug/l	ND	3.8
871210	1,1,1-Trichloroethane	ug/l	ND	3.8
880302	1,1,1-Trichloroethane	ug/l	ND	3.8
880603	1,1,1-Trichloroethane	ug/l	ND	3.8
880913	1,1,1-Trichloroethane	ug/l	ND	3.800
881130	1,1,1-Trichloroethane	ug/l	ND	3.8
890310	1,1,1-Trichloroethane	ug/l	ND	0.76
860129	1,2-Dichloroethane	ug/l	ND	2.8
860627	1,2-Dichloroethane	ug/l	ND	2.8
860925	1,2-Dichloroethane	ug/l	ND	2.8
861223	1,2-Dichloroethane	ug/l	ND	2.8
870317	1,2-Dichloroethane	ug/l	ND	2.8
870528	1,2-Dichloroethane	ug/l	ND	2.8
870903	1,2-Dichloroethane	ug/l	ND	2.8
871210	1,2-Dichloroethane	ug/l	ND	2.8
880302	1,2-Dichloroethane	ug/l	ND	2.8
880603	1,2-Dichloroethane	ug/l	ND	2.8
880913	1,2-Dichloroethane	ug/l	ND	2.800
881130	1,2-Dichloroethane	ug/l	ND	2.8
890310	1,2-Dichloroethane	ug/l	ND	0.56
860129	1,2-Dichloropropane	ug/l	ND	6.0
860627	1,2-Dichloropropane	ug/l	ND	6.0
860925	1,2-Dichloropropane	ug/l	ND	6.0
861223	1,2-Dichloropropane	ug/l	ND	6.0
870317	1,2-Dichloropropane	ug/l	ND	6.0
870528	1,2-Dichloropropane	ug/l	ND	6.0
870903	1,2-Dichloropropane	ug/l	ND	6.0
871210	1,2-Dichloropropane	ug/l	ND	6.0
880302	1,2-Dichloropropane	ug/l	ND	6.0
890310	1,2-Dichloropropane	ug/l	ND	1.2
860129	Chromium	ug/l	ND	20
860627	Chromium	ug/l	<	8
860925	Chromium	ug/l	<	8
861223	Chromium	ug/l	ND	16
870317	Chromium	ug/l	ND	18
870528	Chromium	ug/l	ND	10
870903	Chromium	ug/l	ND	16
871210	Chromium	ug/l	5.0	14
880302	Chromium	ug/l	7.7	20
880603	m-Xylene	ug/l	ND	10
880913	m-Xylene	ug/l	ND	10.000
881130	m-Xylene	ug/l	ND	10
890310	m-Xylene	ug/l	ND	2.0
880603	o+p-Xylenes	ug/l	ND	10
880913	o+p-Xylenes	ug/l	ND	10.000
881130	o+p-Xylenes	ug/l	ND	10
890310	o+p-Xylenes	ug/l	ND	2.0
860129	Tetrachloroethylene	ug/l	ND	4.1

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

EU4R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860627	Tetrachloroethylene	ug/l	ND	4.1
860925	Tetrachloroethylene	ug/l	ND	4.1
861223	Tetrachloroethylene	ug/l	ND	4.1
870317	Tetrachloroethylene	ug/l	ND	4.1
870528	Tetrachloroethylene	ug/l	ND	4.1
870903	Tetrachloroethylene	ug/l	ND	4.1
871210	Tetrachloroethylene	ug/l	ND	4.1
880302	Tetrachloroethylene	ug/l	ND	4.1
880603	Tetrachloroethylene	ug/l	ND	4.1
880913	Tetrachloroethylene	ug/l	ND	4.100
881130	Tetrachloroethylene	ug/l	ND	4.1
890310	Tetrachloroethylene	ug/l	ND	0.82
860129	Toluene	ug/l	ND	6.0
860627	Toluene	ug/l	ND	6.0
860925	Toluene	ug/l	ND	6.0
861223	Toluene	ug/l	ND	6.0
870317	Toluene	ug/l	ND	6.0
870528	Toluene	ug/l	ND	6.0
870903	Toluene	ug/l	ND	6.0
871210	Toluene	ug/l	ND	6.0
880302	Toluene	ug/l	ND	6.0
880603	Toluene	ug/l	ND	6.0
880913	Toluene	ug/l	ND	6.000
881130	Toluene	ug/l	ND	6.0
890310	Toluene	ug/l	ND	1.2

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

EUA04

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
850214	1,1,1-Trichloroethane	ug/l	ND	3.800
850514	1,1,1-Trichloroethane	ug/l	ND	3.800
850813	1,1,1-Trichloroethane	ug/l	ND	3.800
851119	1,1,1-Trichloroethane	ug/l	ND	3.800
850214	1,2-Dichloroethane	ug/l	ND	2.800
850514	1,2-Dichloroethane	ug/l	ND	2.800
850813	1,2-Dichloroethane	ug/l	ND	2.800
851119	1,2-Dichloroethane	ug/l	ND	2.800
850214	1,2-Dichloropropane	ug/l	ND	6.000
850514	1,2-Dichloropropane	ug/l	ND	6.000
850813	1,2-Dichloropropane	ug/l	ND	6.000
851119	1,2-Dichloropropane	ug/l	ND	6.000
850514	Chromium	ug/l	ND	10.000
850214	Tetrachloroethylene	ug/l	ND	4.100
850514	Tetrachloroethylene	ug/l	ND	4.100
850813	Tetrachloroethylene	ug/l	ND	4.100
851119	Tetrachloroethylene	ug/l	ND	4.100
850214	Toluene	ug/l	ND	6.000
850514	Toluene	ug/l	ND	6.000
850813	Toluene	ug/l	3.800	6.000
851119	Toluene	ug/l	ND	6.000

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED5R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860204	1,1,1-Trichloroethane	ug/l	ND	3.8
860627	1,1,1-Trichloroethane	ug/l	ND	3.8
860926	1,1,1-Trichloroethane	ug/l	ND	3.8
861223	1,1,1-Trichloroethane	ug/l	ND	3.8
870313	1,1,1-Trichloroethane	ug/l	ND	19
870528	1,1,1-Trichloroethane	ug/l	ND	3.8
870903	1,1,1-Trichloroethane	ug/l	ND	19
871208	1,1,1-Trichloroethane	ug/l	ND	38
880303	1,1,1-Trichloroethane	ug/l	ND	38
880601	1,1,1-Trichloroethane	ug/l	ND	38
880908	1,1,1-Trichloroethane	ug/l	ND	3.800
881130	1,1,1-Trichloroethane	ug/l	ND	3.8
890307	1,1,1-Trichloroethane	ug/l	ND	0.76
860204	1,2-Dichloroethane	ug/l	ND	2.8
860627	1,2-Dichloroethane	ug/l	ND	2.8
860926	1,2-Dichloroethane	ug/l	ND	2.8
861223	1,2-Dichloroethane	ug/l	ND	2.8
870313	1,2-Dichloroethane	ug/l	ND	14
870528	1,2-Dichloroethane	ug/l	ND	2.8
870903	1,2-Dichloroethane	ug/l	ND	14
871208	1,2-Dichloroethane	ug/l	ND	28
880303	1,2-Dichloroethane	ug/l	ND	28
880601	1,2-Dichloroethane	ug/l	ND	28
880908	1,2-Dichloroethane	ug/l	ND	2.800
881130	1,2-Dichloroethane	ug/l	ND	2.8
890307	1,2-Dichloroethane	ug/l	2.50	0.56
860204	1,2-Dichloropropane	ug/l	ND	6.0
860627	1,2-Dichloropropane	ug/l	ND	6.0
860926	1,2-Dichloropropane	ug/l	ND	6.0
861223	1,2-Dichloropropane	ug/l	ND	6.0
870313	1,2-Dichloropropane	ug/l	ND	30
870528	1,2-Dichloropropane	ug/l	ND	6.0
870903	1,2-Dichloropropane	ug/l	ND	30
871208	1,2-Dichloropropane	ug/l	ND	60
880303	1,2-Dichloropropane	ug/l	ND	60
890307	1,2-Dichloropropane	ug/l	ND	1.2
860204	Chromium	ug/l	ND	10
860627	Chromium	ug/l	<	8
860926	Chromium	ug/l	8	8
861223	Chromium	ug/l	ND	16
870313	Chromium	ug/l	ND	24
870528	Chromium	ug/l	3.1	10
870903	Chromium	ug/l	ND	16
871208	Chromium	ug/l	ND	16
880303	Chromium	ug/l	ND	32
880601	m-Xylene	ug/l	ND	100
880908	m-Xylene	ug/l	ND	10.000
881130	m-Xylene	ug/l	ND	10
890307	m-Xylene	ug/l	ND	2.0
880601	o+p-Xylenes	ug/l	ND	100
880908	o+p-Xylenes	ug/l	ND	10.000
881130	o+p-Xylenes	ug/l	ND	10
890307	o+p-Xylenes	ug/l	ND	2.0
860204	Tetrachloroethylene	ug/l	ND	4.1

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED5R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860627	Tetrachloroethylene	ug/l	ND	4.1
860926	Tetrachloroethylene	ug/l	ND	4.1
861223	Tetrachloroethylene	ug/l	ND	4.1
870313	Tetrachloroethylene	ug/l	ND	21
870528	Tetrachloroethylene	ug/l	ND	4.1
870903	Tetrachloroethylene	ug/l	14.2	21
871208	Tetrachloroethylene	ug/l	ND	41
880303	Tetrachloroethylene	ug/l	ND	41
880601	Tetrachloroethylene	ug/l	ND	41
880908	Tetrachloroethylene	ug/l	ND	4.100
881130	Tetrachloroethylene	ug/l	ND	4.1
890307	Tetrachloroethylene	ug/l	ND	0.82
860204	Toluene	ug/l	0.84	6.0
860627	Toluene	ug/l	ND	6.0
860926	Toluene	ug/l	ND	6.0
861223	Toluene	ug/l	ND	6.0
870313	Toluene	ug/l	ND	30
870528	Toluene	ug/l	ND	6.0
870903	Toluene	ug/l	ND	30
871208	Toluene	ug/l	ND	60
880303	Toluene	ug/l	ND	60
880601	Toluene	ug/l	ND	60
880908	Toluene	ug/l	ND	6.000
881130	Toluene	ug/l	0.924	6.0
890307	Toluene	ug/l	0.951	1.2

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

EU05

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
850214	1,1,1-Trichloroethane	ug/l	ND	3.800
850514	1,1,1-Trichloroethane	ug/l	ND	3.800
860627	1,1,1-Trichloroethane	ug/l	ND	3.8
860925	1,1,1-Trichloroethane	ug/l	ND	3.8
861223	1,1,1-Trichloroethane	ug/l	ND	3.8
870317	1,1,1-Trichloroethane	ug/l	ND	3.8
870520	1,1,1-Trichloroethane	ug/l	ND	3.8
870903	1,1,1-Trichloroethane	ug/l	ND	3.8
871210	1,1,1-Trichloroethane	ug/l	ND	3.8
880303	1,1,1-Trichloroethane	ug/l	2.05	3.8
880602	1,1,1-Trichloroethane	ug/l	ND	3.8
880909	1,1,1-Trichloroethane	ug/l	ND	3.800
881130	1,1,1-Trichloroethane	ug/l	ND	3.8
890309	1,1,1-Trichloroethane	ug/l	0.764	0.76
]50813	1,1,1-Trichloroethane	ug/l	0.000	3.800
850214	1,2-Dichloroethane	ug/l	ND	2.800
850514	1,2-Dichloroethane	ug/l	ND	2.800
850813	1,2-Dichloroethane	ug/l	ND	2.800
860627	1,2-Dichloroethane	ug/l	ND	2.8
860925	1,2-Dichloroethane	ug/l	ND	2.8
861223	1,2-Dichloroethane	ug/l	ND	2.8
870317	1,2-Dichloroethane	ug/l	ND	2.8
870520	1,2-Dichloroethane	ug/l	ND	2.8
870903	1,2-Dichloroethane	ug/l	ND	2.8
871210	1,2-Dichloroethane	ug/l	ND	2.8
880303	1,2-Dichloroethane	ug/l	ND	2.8
880602	1,2-Dichloroethane	ug/l	ND	2.8
880909	1,2-Dichloroethane	ug/l	ND	2.800
881130	1,2-Dichloroethane	ug/l	ND	2.8
890309	1,2-Dichloroethane	ug/l	ND	0.56
850214	1,2-Dichloropropane	ug/l	ND	6.000
850514	1,2-Dichloropropane	ug/l	ND	6.000
850813	1,2-Dichloropropane	ug/l	ND	6.000
860627	1,2-Dichloropropane	ug/l	ND	6.0
860925	1,2-Dichloropropane	ug/l	ND	6.0
861223	1,2-Dichloropropane	ug/l	ND	6.0
870317	1,2-Dichloropropane	ug/l	ND	6.0
870520	1,2-Dichloropropane	ug/l	ND	6.0
870903	1,2-Dichloropropane	ug/l	ND	6.0
871210	1,2-Dichloropropane	ug/l	ND	6.0
880303	1,2-Dichloropropane	ug/l	ND	6.0
890309	1,2-Dichloropropane	ug/l	ND	1.2
850514	Chromium	ug/l	ND	10.000
860627	Chromium	ug/l	<	8
861223	Chromium	ug/l	ND	16
870317	Chromium	ug/l	ND	18
870520	Chromium	ug/l	ND	14
880303	Chromium	ug/l	ND	32
880602	m-Xylene	ug/l	ND	10
880909	m-Xylene	ug/l	ND	10.000
881130	m-Xylene	ug/l	ND	10
890309	m-Xylene	ug/l	ND	2.0
880602	o+p-Xylenes	ug/l	ND	10
880909	o+p-Xylenes	ug/l	ND	10.000

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

EU05

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
881130	o+p-Xylenes	ug/l	ND	10
890309	o+p-Xylenes	ug/l	ND	2.0
850214	Tetrachloroethylene	ug/l	ND	4.100
850514	Tetrachloroethylene	ug/l	ND	4.100
850813	Tetrachloroethylene	ug/l	ND	4.100
860627	Tetrachloroethylene	ug/l	ND	4.1
860925	Tetrachloroethylene	ug/l	ND	4.1
861223	Tetrachloroethylene	ug/l	ND	4.1
870317	Tetrachloroethylene	ug/l	ND	4.1
870520	Tetrachloroethylene	ug/l	ND	4.1
870903	Tetrachloroethylene	ug/l	ND	4.1
871210	Tetrachloroethylene	ug/l	ND	4.1
880303	Tetrachloroethylene	ug/l	1.48	4.1
880602	Tetrachloroethylene	ug/l	ND	4.1
880909	Tetrachloroethylene	ug/l	ND	4.100
881130	Tetrachloroethylene	ug/l	3.00	4.1
890309	Tetrachloroethylene	ug/l	ND	0.82
850214	Toluene	ug/l	ND	6.000
850514	Toluene	ug/l	ND	6.000
850813	Toluene	ug/l	ND	6.000
860627	Toluene	ug/l	ND	6.0
860925	Toluene	ug/l	ND	6.0
861223	Toluene	ug/l	ND	6.0
870317	Toluene	ug/l	ND	6.0
870520	Toluene	ug/l	ND	6.0
870903	Toluene	ug/l	ND	6.0
871210	Toluene	ug/l	ND	6.0
880303	Toluene	ug/l	ND	6.0
880602	Toluene	ug/l	1.07	6.0
880909	Toluene	ug/l	ND	6.000
881130	Toluene	ug/l	ND	6.0
890309	Toluene	ug/l	ND	1.2

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED6R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860131	1,1,1-Trichloroethane	ug/l	ND	3.8
860626	1,1,1-Trichloroethane	ug/l	ND	3.8
860925	1,1,1-Trichloroethane	ug/l	ND	3.8
861216	1,1,1-Trichloroethane	ug/l	ND	3.8
870313	1,1,1-Trichloroethane	ug/l	ND	3.8
870528	1,1,1-Trichloroethane	ug/l	ND	3.8
870903	1,1,1-Trichloroethane	ug/l	ND	3.8
871209	1,1,1-Trichloroethane	ug/l	ND	3.8
880303	1,1,1-Trichloroethane	ug/l	ND	3.8
880601	1,1,1-Trichloroethane	ug/l	1.04	3.8
880909	1,1,1-Trichloroethane	ug/l	ND	3.8
881130	1,1,1-Trichloroethane	ug/l	ND	3.8
890308	1,1,1-Trichloroethane	ug/l	ND	7.6
860131	1,2-Dichloroethane	ug/l	ND	2.8
860626	1,2-Dichloroethane	ug/l	7.56	2.8
860925	1,2-Dichloroethane	ug/l	ND	2.8
861216	1,2-Dichloroethane	ug/l	3.73	2.8
870313	1,2-Dichloroethane	ug/l	6.09	2.8
870528	1,2-Dichloroethane	ug/l	5.24	2.8
870903	1,2-Dichloroethane	ug/l	4.41	2.8
871209	1,2-Dichloroethane	ug/l	ND	2.8
880303	1,2-Dichloroethane	ug/l	ND	2.8
880601	1,2-Dichloroethane	ug/l	ND	2.8
880909	1,2-Dichloroethane	ug/l	ND	2.8
881130	1,2-Dichloroethane	ug/l	2.60	2.8
890308	1,2-Dichloroethane	ug/l	ND	5.6
860131	1,2-Dichloropropane	ug/l	ND	6.0
860626	1,2-Dichloropropane	ug/l	ND	6.0
860925	1,2-Dichloropropane	ug/l	ND	6.0
861216	1,2-Dichloropropane	ug/l	ND	6.0
870313	1,2-Dichloropropane	ug/l	ND	6.0
870528	1,2-Dichloropropane	ug/l	ND	6.0
870903	1,2-Dichloropropane	ug/l	ND	6.0
871209	1,2-Dichloropropane	ug/l	ND	6.0
880303	1,2-Dichloropropane	ug/l	ND	6.0
890308	1,2-Dichloropropane	ug/l	ND	12
860626	Chromium	ug/l	<	8
860925	Chromium	ug/l	<	8
861216	Chromium	ug/l	ND	13
870313	Chromium	ug/l	5.9	24
870528	Chromium	ug/l	12	10
870903	Chromium	ug/l	ND	16
871209	Chromium	ug/l	4.1	13
880303	Chromium	ug/l	ND	32
880601	m-Xylene	ug/l	ND	10
880909	m-Xylene	ug/l	ND	10
881130	m-Xylene	ug/l	ND	10
890308	m-Xylene	ug/l	ND	20
880601	o+p-Xylenes	ug/l	ND	10
880909	o+p-Xylenes	ug/l	ND	10
881130	o+p-Xylenes	ug/l	ND	10
890308	o+p-Xylenes	ug/l	ND	20
860131	Tetrachloroethylene	ug/l	ND	4.1
860626	Tetrachloroethylene	ug/l	ND	4.1

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED6R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860925	Tetrachloroethylene	ug/l	ND	4.1
861216	Tetrachloroethylene	ug/l	ND	4.1
870313	Tetrachloroethylene	ug/l	ND	4.1
870528	Tetrachloroethylene	ug/l	ND	4.1
870903	Tetrachloroethylene	ug/l	ND	4.1
871209	Tetrachloroethylene	ug/l	ND	4.1
880303	Tetrachloroethylene	ug/l	ND	4.1
880601	Tetrachloroethylene	ug/l	ND	4.1
880909	Tetrachloroethylene	ug/l	ND	4.1
881130	Tetrachloroethylene	ug/l	ND	4.1
890308	Tetrachloroethylene	ug/l	ND	8.2
860131	Toluene	ug/l	ND	6.0
860626	Toluene	ug/l	ND	6.0
860925	Toluene	ug/l	ND	6.0
861216	Toluene	ug/l	ND	6.0
870313	Toluene	ug/l	ND	6.0
870528	Toluene	ug/l	ND	6.0
870903	Toluene	ug/l	ND	6.0
871209	Toluene	ug/l	ND	6.0
880303	Toluene	ug/l	ND	6.0
880601	Toluene	ug/l	ND	6.0
880909	Toluene	ug/l	ND	6.0
881130	Toluene	ug/l	ND	6.0
890308	Toluene	ug/l	ND	12

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED6S

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860131	1,1,1-Trichloroethane	ug/l	ND	3.8
861223	1,1,1-Trichloroethane	ug/l	ND	3.8
870313	1,1,1-Trichloroethane	ug/l	ND	3.8
880601	1,1,1-Trichloroethane	ug/l	ND	3.8
880909	1,1,1-Trichloroethane	ug/l	ND	3.8
881130	1,1,1-Trichloroethane	ug/l	ND	3.8
860131	1,2-Dichloroethane	ug/l	ND	2.8
861223	1,2-Dichloroethane	ug/l	ND	2.8
870313	1,2-Dichloroethane	ug/l	ND	2.8
880601	1,2-Dichloroethane	ug/l	ND	2.8
880909	1,2-Dichloroethane	ug/l	ND	2.8
881130	1,2-Dichloroethane	ug/l	ND	2.8
860131	1,2-Dichloropropane	ug/l	ND	6.0
861223	1,2-Dichloropropane	ug/l	ND	6.0
870313	1,2-Dichloropropane	ug/l	ND	6.0
860131	Chromium	ug/l	3	10
861223	Chromium	ug/l	ND	16
870313	Chromium	ug/l	ND	24
880601	m-Xylene	ug/l	ND	10
880909	m-Xylene	ug/l	ND	10
881130	m-Xylene	ug/l	ND	10
880601	o+p-Xylenes	ug/l	ND	10
880909	o+p-Xylenes	ug/l	ND	10
881130	o+p-Xylenes	ug/l	ND	10
860131	Tetrachloroethylene	ug/l	ND	4.1
861223	Tetrachloroethylene	ug/l	ND	4.1
870313	Tetrachloroethylene	ug/l	ND	4.1
880601	Tetrachloroethylene	ug/l	ND	4.1
880909	Tetrachloroethylene	ug/l	ND	4.1
881130	Tetrachloroethylene	ug/l	ND	4.1
860131	Toluene	ug/l	ND	6.0
861223	Toluene	ug/l	ND	6.0
870313	Toluene	ug/l	ND	6.0
880601	Toluene	ug/l	3.18	6.0
880909	Toluene	ug/l	ND	6.0
881130	Toluene	ug/l	ND	6.0

AR303620

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED7R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860131	1,1,1-Trichloroethane	ug/l	ND	3.8
860626	1,1,1-Trichloroethane	ug/l	ND	3.8
860925	1,1,1-Trichloroethane	ug/l	ND	3.8
861216	1,1,1-Trichloroethane	ug/l	ND	3.8
870313	1,1,1-Trichloroethane	ug/l	ND	3.8
870528	1,1,1-Trichloroethane	ug/l	ND	3.8
870902	1,1,1-Trichloroethane	ug/l	ND	3.8
871209	1,1,1-Trichloroethane	ug/l	ND	3.8
880302	1,1,1-Trichloroethane	ug/l	ND	3.8
880601	1,1,1-Trichloroethane	ug/l	ND	3.8
880913	1,1,1-Trichloroethane	ug/l	ND	3.800
881130	1,1,1-Trichloroethane	ug/l	ND	3.8
890310	1,1,1-Trichloroethane	ug/l	ND	0.76
860131	1,2-Dichloroethane	ug/l	ND	2.8
860626	1,2-Dichloroethane	ug/l	ND	2.8
860925	1,2-Dichloroethane	ug/l	ND	2.8
861216	1,2-Dichloroethane	ug/l	ND	2.8
870313	1,2-Dichloroethane	ug/l	ND	2.8
870528	1,2-Dichloroethane	ug/l	ND	2.8
870902	1,2-Dichloroethane	ug/l	ND	2.8
871209	1,2-Dichloroethane	ug/l	ND	2.8
880302	1,2-Dichloroethane	ug/l	ND	2.8
880601	1,2-Dichloroethane	ug/l	ND	2.8
880913	1,2-Dichloroethane	ug/l	ND	2.800
881130	1,2-Dichloroethane	ug/l	ND	2.8
890310	1,2-Dichloroethane	ug/l	ND	0.56
860131	1,2-Dichloropropane	ug/l	ND	6.0
860626	1,2-Dichloropropane	ug/l	ND	6.0
860925	1,2-Dichloropropane	ug/l	ND	6.0
861216	1,2-Dichloropropane	ug/l	ND	6.0
870313	1,2-Dichloropropane	ug/l	ND	6.0
870528	1,2-Dichloropropane	ug/l	ND	6.0
870902	1,2-Dichloropropane	ug/l	ND	6.0
871209	1,2-Dichloropropane	ug/l	ND	6.0
880302	1,2-Dichloropropane	ug/l	ND	6.0
890310	1,2-Dichloropropane	ug/l	ND	1.2
860131	Chromium	ug/l	ND	10
860626	Chromium	ug/l	<	8
860925	Chromium	ug/l	<	8
861216	Chromium	ug/l	ND	13
870313	Chromium	ug/l	ND	24
870528	Chromium	ug/l	ND	10
870902	Chromium	ug/l	ND	16
871209	Chromium	ug/l	2.8	13
880302	Chromium	ug/l	ND	20
880601	m-Xylene	ug/l	ND	10
880913	m-Xylene	ug/l	ND	10.000
881130	m-Xylene	ug/l	ND	10
890310	m-Xylene	ug/l	ND	2.0
880601	o+p-Xylenes	ug/l	ND	10
880913	o+p-Xylenes	ug/l	ND	10.000
881130	o+p-Xylenes	ug/l	ND	10
890310	o+p-Xylenes	ug/l	ND	2.0
860131	Tetrachloroethylene	ug/l	ND	4.1

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED7R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860626	Tetrachloroethylene	ug/l	ND	4.1
860925	Tetrachloroethylene	ug/l	ND	4.1
861216	Tetrachloroethylene	ug/l	ND	4.1
870313	Tetrachloroethylene	ug/l	ND	4.1
870528	Tetrachloroethylene	ug/l	ND	4.1
870902	Tetrachloroethylene	ug/l	ND	4.1
871209	Tetrachloroethylene	ug/l	ND	4.1
880302	Tetrachloroethylene	ug/l	1.49	4.1
880601	Tetrachloroethylene	ug/l	ND	4.1
880913	Tetrachloroethylene	ug/l	ND	4.100
881130	Tetrachloroethylene	ug/l	ND	4.1
890310	Tetrachloroethylene	ug/l	1.13	0.82
860131	Toluene	ug/l	ND	6.0
860626	Toluene	ug/l	ND	6.0
860925	Toluene	ug/l	ND	6.0
861216	Toluene	ug/l	ND	6.0
870313	Toluene	ug/l	ND	6.0
870528	Toluene	ug/l	ND	6.0
870902	Toluene	ug/l	ND	6.0
871209	Toluene	ug/l	ND	6.0
880302	Toluene	ug/l	ND	6.0
880601	Toluene	ug/l	ND	6.0
880913	Toluene	ug/l	ND	6.000
881130	Toluene	ug/l	ND	6.0
890310	Toluene	ug/l	ND	1.2

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED8R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860129	1,1,1-Trichloroethane	ug/l	3.2	3.8
860626	1,1,1-Trichloroethane	ug/l	ND	3.8
860926	1,1,1-Trichloroethane	ug/l	ND	3.8
861216	1,1,1-Trichloroethane	ug/l	ND	3.8
870313	1,1,1-Trichloroethane	ug/l	ND	3.8
870528	1,1,1-Trichloroethane	ug/l	ND	3.8
870903	1,1,1-Trichloroethane	ug/l	ND	3.8
871209	1,1,1-Trichloroethane	ug/l	ND	3.8
880303	1,1,1-Trichloroethane	ug/l	ND	3.8
880602	1,1,1-Trichloroethane	ug/l	ND	3.8
880909	1,1,1-Trichloroethane	ug/l	ND	3.800
881130	1,1,1-Trichloroethane	ug/l	ND	3.8
890309	1,1,1-Trichloroethane	ug/l	ND	0.76
860129	1,2-Dichloroethane	ug/l	ND	2.8
860626	1,2-Dichloroethane	ug/l	ND	2.8
860926	1,2-Dichloroethane	ug/l	ND	2.8
861216	1,2-Dichloroethane	ug/l	3.24	2.8
870313	1,2-Dichloroethane	ug/l	ND	2.8
870528	1,2-Dichloroethane	ug/l	ND	2.8
870903	1,2-Dichloroethane	ug/l	ND	2.8
871209	1,2-Dichloroethane	ug/l	ND	2.8
880303	1,2-Dichloroethane	ug/l	ND	2.8
880602	1,2-Dichloroethane	ug/l	ND	2.8
880909	1,2-Dichloroethane	ug/l	ND	2.800
881130	1,2-Dichloroethane	ug/l	ND	2.8
890309	1,2-Dichloroethane	ug/l	ND	0.56
860129	1,2-Dichloropropane	ug/l	ND	6.0
860626	1,2-Dichloropropane	ug/l	ND	6.0
860926	1,2-Dichloropropane	ug/l	ND	6.0
861216	1,2-Dichloropropane	ug/l	ND	6.0
870313	1,2-Dichloropropane	ug/l	ND	6.0
870528	1,2-Dichloropropane	ug/l	ND	6.0
870903	1,2-Dichloropropane	ug/l	ND	6.0
871209	1,2-Dichloropropane	ug/l	ND	6.0
880303	1,2-Dichloropropane	ug/l	ND	6.0
890309	1,2-Dichloropropane	ug/l	ND	1.2
860129	Chromium	ug/l	30	30
860626	Chromium	ug/l	<	8
860926	Chromium	ug/l	<	8
861216	Chromium	ug/l	ND	13
870313	Chromium	ug/l	ND	24
870528	Chromium	ug/l	ND	10
870903	Chromium	ug/l	ND	16
871209	Chromium	ug/l	3.2	13
880303	Chromium	ug/l	ND	32
880602	m-Xylene	ug/l	ND	10
880909	m-Xylene	ug/l	ND	10.000
881130	m-Xylene	ug/l	ND	10
890309	m-Xylene	ug/l	ND	2.0
880602	o+p-Xylenes	ug/l	2.58	10
880909	o+p-Xylenes	ug/l	ND	10.000
881130	o+p-Xylenes	ug/l	ND	10
890309	o+p-Xylenes	ug/l	ND	2.0
860129	Tetrachloroethylene	ug/l	ND	4.1

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED8R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860626	Tetrachloroethylene	ug/l	ND	4.1
860926	Tetrachloroethylene	ug/l	5.00	4.1
861216	Tetrachloroethylene	ug/l	4.40	4.1
870313	Tetrachloroethylene	ug/l	3.96	4.1
870528	Tetrachloroethylene	ug/l	5.36	4.1
870903	Tetrachloroethylene	ug/l	3.42	4.1
871209	Tetrachloroethylene	ug/l	ND	4.1
880303	Tetrachloroethylene	ug/l	2.25	4.1
880602	Tetrachloroethylene	ug/l	1.82	4.1
880909	Tetrachloroethylene	ug/l	ND	4.100
881130	Tetrachloroethylene	ug/l	ND	4.1
890309	Tetrachloroethylene	ug/l	ND	0.82
860129	Toluene	ug/l	2.8	6.0
860626	Toluene	ug/l	ND	6.0
860926	Toluene	ug/l	ND	6.0
861216	Toluene	ug/l	ND	6.0
870313	Toluene	ug/l	ND	6.0
870528	Toluene	ug/l	ND	6.0
870903	Toluene	ug/l	ND	6.0
871209	Toluene	ug/l	ND	6.0
880303	Toluene	ug/l	ND	6.0
880602	Toluene	ug/l	3.90	6.0
880909	Toluene	ug/l	ND	6.000
881130	Toluene	ug/l	ND	6.0
890309	Toluene	ug/l	ND	1.2

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED8S

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860131	1,1,1-Trichloroethane	ug/l	ND	3.8
861223	1,1,1-Trichloroethane	ug/l	ND	3.8
870317	1,1,1-Trichloroethane	ug/l	ND	3.8
870528	1,1,1-Trichloroethane	ug/l	ND	3.8
871209	1,1,1-Trichloroethane	ug/l	ND	3.8
880303	1,1,1-Trichloroethane	ug/l	ND	3.8
880602	1,1,1-Trichloroethane	ug/l	ND	3.8
880909	1,1,1-Trichloroethane	ug/l	ND	3.800
881130	1,1,1-Trichloroethane	ug/l	ND	3.8
890309	1,1,1-Trichloroethane	ug/l	ND	0.76
860131	1,2-Dichloroethane	ug/l	ND	2.8
861223	1,2-Dichloroethane	ug/l	ND	2.8
870317	1,2-Dichloroethane	ug/l	ND	2.8
870528	1,2-Dichloroethane	ug/l	ND	2.8
871209	1,2-Dichloroethane	ug/l	ND	2.8
880303	1,2-Dichloroethane	ug/l	ND	2.8
880602	1,2-Dichloroethane	ug/l	ND	2.8
880909	1,2-Dichloroethane	ug/l	ND	2.800
881130	1,2-Dichloroethane	ug/l	ND	2.8
890309	1,2-Dichloroethane	ug/l	ND	0.56
860131	1,2-Dichloropropane	ug/l	ND	6.0
861223	1,2-Dichloropropane	ug/l	ND	6.0
870317	1,2-Dichloropropane	ug/l	ND	6.0
870528	1,2-Dichloropropane	ug/l	ND	6.0
871209	1,2-Dichloropropane	ug/l	ND	6.0
880303	1,2-Dichloropropane	ug/l	ND	6.0
890309	1,2-Dichloropropane	ug/l	ND	1.2
860131	Chromium	ug/l	ND	10
861223	Chromium	ug/l	ND	16
870317	Chromium	ug/l	ND	18
870528	Chromium	ug/l	2.6	10
871209	Chromium	ug/l	ND	13
880303	Chromium	ug/l	ND	32
880602	m-Xylene	ug/l	ND	10
880909	m-Xylene	ug/l	ND	10.000
881130	m-Xylene	ug/l	ND	10
890309	m-Xylene	ug/l	ND	2.0
880602	o+p-Xylenes	ug/l	ND	10
880909	o+p-Xylenes	ug/l	ND	10.000
881130	o+p-Xylenes	ug/l	ND	10
890309	o+p-Xylenes	ug/l	ND	2.0
860131	Tetrachloroethylene	ug/l	ND	4.1
861223	Tetrachloroethylene	ug/l	ND	4.1
870317	Tetrachloroethylene	ug/l	ND	4.1
870528	Tetrachloroethylene	ug/l	ND	4.1
871209	Tetrachloroethylene	ug/l	ND	4.1
880303	Tetrachloroethylene	ug/l	ND	4.1
880602	Tetrachloroethylene	ug/l	ND	4.1
880909	Tetrachloroethylene	ug/l	ND	4.100
881130	Tetrachloroethylene	ug/l	ND	4.1
890309	Tetrachloroethylene	ug/l	ND	0.82
860131	Toluene	ug/l	ND	6.0
861223	Toluene	ug/l	ND	6.0
870317	Toluene	ug/l	ND	6.0

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED8S

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
870528	Toluene	ug/l	ND	6.0
871209	Toluene	ug/l	ND	6.0
880303	Toluene	ug/l	ND	6.0
880602	Toluene	ug/l	ND	6.0
880909	Toluene	ug/l	ND	6.000
881130	Toluene	ug/l	ND	6.0
890309	Toluene	ug/l	ND	1.2

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED9R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860129	1,1,1-Trichloroethane	ug/l	ND	38
860626	1,1,1-Trichloroethane	ug/l	3.6	3.8
860926	1,1,1-Trichloroethane	ug/l	ND	3.8
861223	1,1,1-Trichloroethane	ug/l	ND	3.8
870317	1,1,1-Trichloroethane	ug/l	ND	3.8
870528	1,1,1-Trichloroethane	ug/l	ND	3.8
870903	1,1,1-Trichloroethane	ug/l	ND	3.8
871209	1,1,1-Trichloroethane	ug/l	ND	3.8
880303	1,1,1-Trichloroethane	ug/l	ND	38
880603	1,1,1-Trichloroethane	ug/l	ND	38
880909	1,1,1-Trichloroethane	ug/l	ND	38.000
881130	1,1,1-Trichloroethane	ug/l	ND	3.8
890309	1,1,1-Trichloroethane	ug/l	ND	19
860129	1,2-Dichloroethane	ug/l	ND	28
860626	1,2-Dichloroethane	ug/l	12.7	2.8
860926	1,2-Dichloroethane	ug/l	11.4	2.8
861223	1,2-Dichloroethane	ug/l	9.06	2.8
870317	1,2-Dichloroethane	ug/l	10.9	2.8
870528	1,2-Dichloroethane	ug/l	11.3	2.8
870903	1,2-Dichloroethane	ug/l	8.91	2.8
871209	1,2-Dichloroethane	ug/l	ND	2.8
880303	1,2-Dichloroethane	ug/l	ND	28
880603	1,2-Dichloroethane	ug/l	ND	28
880909	1,2-Dichloroethane	ug/l	ND	28.000
881130	1,2-Dichloroethane	ug/l	6.66	2.8
890309	1,2-Dichloroethane	ug/l	ND	14
860129	1,2-Dichloropropane	ug/l	ND	60
860626	1,2-Dichloropropane	ug/l	4.2	6.0
860926	1,2-Dichloropropane	ug/l	ND	6.0
861223	1,2-Dichloropropane	ug/l	4.3	6.0
870317	1,2-Dichloropropane	ug/l	6.31	6.0
870528	1,2-Dichloropropane	ug/l	5.94	6.0
870903	1,2-Dichloropropane	ug/l	4.03	6.0
871209	1,2-Dichloropropane	ug/l	ND	6.0
880303	1,2-Dichloropropane	ug/l	ND	60
890309	1,2-Dichloropropane	ug/l	ND	30
860129	Chromium	ug/l	7	20
860626	Chromium	ug/l	<	8
860926	Chromium	ug/l	<	8
861223	Chromium	ug/l	ND	16
870317	Chromium	ug/l	ND	18
870528	Chromium	ug/l	3.0	10
870903	Chromium	ug/l	ND	16
871209	Chromium	ug/l	2.7	13
880303	Chromium	ug/l	ND	32
880603	m-Xylene	ug/l	ND	100
880909	m-Xylene	ug/l	ND	100.000
881130	m-Xylene	ug/l	ND	10
890309	m-Xylene	ug/l	ND	50
880603	o+p-Xylenes	ug/l	ND	100
880909	o+p-Xylenes	ug/l	ND	100.000
881130	o+p-Xylenes	ug/l	ND	10
890309	o+p-Xylenes	ug/l	ND	50
860129	Tetrachloroethylene	ug/l	ND	41

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED9R

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
860626	Tetrachloroethylene	ug/l	2.7	4.1
860926	Tetrachloroethylene	ug/l	4.0	4.1
861223	Tetrachloroethylene	ug/l	9.38	4.1
870317	Tetrachloroethylene	ug/l	7.24	4.1
870528	Tetrachloroethylene	ug/l	9.50	4.1
870903	Tetrachloroethylene	ug/l	2.05	4.1
871209	Tetrachloroethylene	ug/l	ND	4.1
880303	Tetrachloroethylene	ug/l	ND	41
880603	Tetrachloroethylene	ug/l	ND	41
880909	Tetrachloroethylene	ug/l	ND	41.000
881130	Tetrachloroethylene	ug/l	3.26	4.1
890309	Tetrachloroethylene	ug/l	ND	21
860129	Toluene	ug/l	108	60
860626	Toluene	ug/l	2.0	6.0
860926	Toluene	ug/l	1.5	6.0
861223	Toluene	ug/l	3.6	6.0
870317	Toluene	ug/l	ND	6.0
870528	Toluene	ug/l	ND	6.0
870903	Toluene	ug/l	0.926	6.0
871209	Toluene	ug/l	ND	6.0
880303	Toluene	ug/l	ND	60
880603	Toluene	ug/l	ND	60
880909	Toluene	ug/l	38.400	60.000
881130	Toluene	ug/l	0.748	6.0
890309	Toluene	ug/l	ND	30

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED10D

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
880824	1,1,1-Trichloroethane	ug/l	ND	5.00
890308	1,1,1-Trichloroethane	ug/l	ND	0.76
880824	1,2-Dichloroethane	ug/l	ND	5.00
890308	1,2-Dichloroethane	ug/l	ND	0.56
880824	1,2-Dichloropropane	ug/l	ND	5.00
890308	1,2-Dichloropropane	ug/l	ND	1.2
890308	m-Xylene	ug/l	ND	2.0
890308	o+p-Xylenes	ug/l	ND	2.0
880824	Tetrachloroethylene	ug/l	ND	5.00
890308	Tetrachloroethylene	ug/l	ND	0.82
880824	Toluene	ug/l	ND	5.00
890308	Toluene	ug/l	1.09	1.2

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED10I

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
880824	1,1,1-Trichloroethane	ug/l	ND	50.00
890308	1,1,1-Trichloroethane	ug/l	ND	38
880824	1,2-Dichloroethane	ug/l	ND	50.00
890308	1,2-Dichloroethane	ug/l	ND	28
880824	1,2-Dichloropropane	ug/l	ND	50.00
890308	1,2-Dichloropropane	ug/l	ND	60
890308	m-Xylene	ug/l	ND	100
890308	o+p-Xylenes	ug/l	ND	100
880824	Tetrachloroethylene	ug/l	ND	50.00
890308	Tetrachloroethylene	ug/l	ND	41
880824	Toluene	ug/l	ND	50.00
890308	Toluene	ug/l	ND	60

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED11D

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
880824	1,1,1-Trichloroethane	ug/l	ND	5.00
890307	1,1,1-Trichloroethane	ug/l	1.28	0.76
880824	1,2-Dichloroethane	ug/l	ND	5.00
890307	1,2-Dichloroethane	ug/l	ND	0.56
880824	1,2-Dichloropropane	ug/l	ND	5.00
890307	1,2-Dichloropropane	ug/l	ND	1.2
890307	m-Xylene	ug/l	ND	2.0
890307	o+p-Xylenes	ug/l	ND	2.0
880824	Tetrachloroethylene	ug/l	ND	5.00
890307	Tetrachloroethylene	ug/l	ND	0.82
880824	Toluene	ug/l	ND	5.00
890307	Toluene	ug/l	0.490	1.2

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED111

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
880824	1,1,1-Trichloroethane	ug/l	ND	5.00
890308	1,1,1-Trichloroethane	ug/l	ND	0.76
880824	1,2-Dichloroethane	ug/l	ND	5.00
890308	1,2-Dichloroethane	ug/l	ND	0.56
880824	1,2-Dichloropropane	ug/l	ND	5.00
890308	1,2-Dichloropropane	ug/l	ND	1.2
890308	m-Xylene	ug/l	ND	2.0
890308	o+p-Xylenes	ug/l	ND	2.0
880824	Tetrachloroethylene	ug/l	ND	5.00
890308	Tetrachloroethylene	ug/l	ND	0.82
880824	Toluene	ug/l	ND	5.00
890308	Toluene	µg/l	0.357	1.2

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED11S

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
880825	1,1,1-Trichloroethane	ug/l	ND	5.00
890308	1,1,1-Trichloroethane	ug/l	ND	0.76
880825	1,2-Dichloroethane	ug/l	ND	5.00
890308	1,2-Dichloroethane	ug/l	ND	0.56
880825	1,2-Dichloropropane	ug/l	ND	5.00
890308	1,2-Dichloropropane	ug/l	ND	1.2
890308	m-Xylene	ug/l	ND	2.0
890308	o+p-Xylenes	ug/l	ND	2.0
880825	Tetrachloroethylene	ug/l	ND	5.00
890308	Tetrachloroethylene	ug/l	ND	0.82
880825	Toluene	ug/l	ND	5.00
890308	Toluene	ug/l	0.171	1.2

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED12D

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
880823	1,1,1-Trichloroethane	ug/l	ND	1000.00
890314	1,1,1-Trichloroethane	ug/l	ND	76
880823	1,2-Dichloroethane	ug/l	ND	1000.00
890314	1,2-Dichloroethane	ug/l	ND	56
880823	1,2-Dichloropropane	ug/l	ND	1000.00
890314	1,2-Dichloropropane	ug/l	ND	120
890314	m-Xylene	ug/l	ND	200
890314	o+p-Xylenes	ug/l	ND	200
880823	Tetrachloroethylene	ug/l	ND	1000.00
890314	Tetrachloroethylene	ug/l	ND	82
880823	Toluene	ug/l	2400.000	1000.00
890314	Toluene	ug/l	2240	120

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED12I

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
880823	1,1,1-Trichloroethane	ug/l	ND	10.00
890314	1,1,1-Trichloroethane	ug/l	ND	0.76
880823	1,2-Dichloroethane	ug/l	ND	10.00
890314	1,2-Dichloroethane	ug/l	2.63	0.56
880823	1,2-Dichloropropane	ug/l	ND	10.00
890314	1,2-Dichloropropane	ug/l	ND	1.2
890314	m-Xylene	ug/l	ND	2.0
890314	o+p-Xylenes	ug/l	ND	2.0
880823	Tetrachloroethylene	ug/l	ND	10.00
890314	Tetrachloroethylene	ug/l	0.75i	0.82
880823	Toluene	ug/l	ND	10.00
890314	Toluene	ug/l	1.87	1.2

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED12S

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
880822	1,1,1-Trichloroethane	ug/l	ND	5.00
890314	1,1,1-Trichloroethane	ug/l	ND	0.76
880822	1,2-Dichloroethane	ug/l	ND	5.00
890314	1,2-Dichloroethane	ug/l	ND	0.56
880822	1,2-Dichloropropane	ug/l	ND	5.00
890314	1,2-Dichloropropane	ug/l	ND	1.2
890314	m-Xylene	ug/l	ND	2.0
890314	o+p-Xylenes	ug/l	ND	2.0
880822	Tetrachloroethylene	ug/l	ND	5.00
890314	Tetrachloroethylene	ug/l	ND	0.82
880822	Toluene	ug/l	ND	5.00
890314	Toluene	ug/l	ND	1.2

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED13D

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
880824	1,1,1-Trichloroethane	ug/l	130.000	25.00
890310	1,1,1-Trichloroethane	ug/l	108	3.8
880824	1,2-Dichloroethane	ug/l	ND	25.00
890310	1,2-Dichloroethane	ug/l	ND	2.8
880824	1,2-Dichloropropane	ug/l	ND	25.00
890310	1,2-Dichloropropane	ug/l	ND	6.0
890310	m-Xylene	ug/l	ND	10
890310	o+p-Xylenes	ug/l	ND	10
880824	Tetrachloroethylene	ug/l	ND	25.00
890310	Tetrachloroethylene	ug/l	ND	4.1
880824	Toluene	ug/l	ND	25.00
890310	Toluene	ug/l	1.87	6.0

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED13I

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
880824	1,1,1-Trichloroethane	ug/l	ND	5.00
890310	1,1,1-Trichloroethane	ug/l	4.15	0.76
880824	1,2-Dichloroethane	ug/l	ND	5.00
890310	1,2-Dichloroethane	ug/l	ND	0.56
880824	1,2-Dichloropropane	ug/l	ND	5.00
890310	1,2-Dichloropropane	ug/l	ND	1.2
890310	m-Xylene	ug/l	ND	2.0
890310	o+p-Xylenes	ug/l	ND	2.0
880824	Tetrachloroethylene	ug/l	ND	5.00
890310	Tetrachloroethylene	ug/l	ND	0.82
880824	Toluene	ug/l	ND	5.00
890310	Toluene	ug/l	0.710	1.2

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

ED13S

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
880823	1,1,1-Trichloroethane	ug/l	ND	5.00
890310	1,1,1-Trichloroethane	ug/l	1.24	0.76
880823	1,2-Dichloroethane	ug/l	ND	5.00
890310	1,2-Dichloroethane	ug/l	ND	0.56
880823	1,2-Dichloropropane	ug/l	ND	5.00
890310	1,2-Dichloropropane	ug/l	ND	1.2
890310	m-Xylene	ug/l	ND	2.0
890310	o+p-Xylenes	ug/l	ND	2.0
880823	Tetrachloroethylene	ug/l	ND	5.00
890310	Tetrachloroethylene	ug/l	ND	0.82
880823	Toluene	ug/l	ND	5.00
890310	Toluene	ug/l	0.216	1.2

ELIZABETHTOWN LANDFILL

ENVIRONMENTAL TESTING & CERTIFICATION CORPORATION DATA

PRESENTATION OF HISTORICAL GROUNDWATER CHEMISTRY DATA SORTED BY SAMPLE LOCATION, PARAMETER, AND DATE (yymmdd)

EU14D

DATE	PARAMETER	UNITS	RESULT	DETECTION LIMIT
880817	1,1,1-Trichloroethane	ug/l	ND	5.00
890314	1,1,1-Trichloroethane	ug/l	ND	0.76
880817	1,2-Dichloroethane	ug/l	ND	5.00
890314	1,2-Dichloroethane	ug/l	ND	0.56
880817	1,2-Dichloropropane	ug/l	ND	5.00
890314	1,2-Dichloropropane	ug/l	ND	1.2
890314	m-Xylene	ug/l	ND	2.0
890314	o+p-Xylenes	ug/l	ND	2.0
880817	Tetrachloroethylene	ug/l	ND	5.00
890314	Tetrachloroethylene	ug/l	ND	0.82
880817	Toluene	ug/l	ND	5.00
890314	Toluene	ug/l	1.08	1.2

APPENDIX F

CLP DATA VALIDATION NARRATIVES

Groundwater

CLP DATA VALIDATION NARRATIVE GROUNDWATER

1.0 INTRODUCTION

Golder Associates, Inc. (Golder) has performed a data validation of the analytical data from the Phase 1A groundwater samples collected August 10 through 13, 1992 at the Elizabethtown Landfill in Lancaster County, Pennsylvania. The samples were collected in support of the Phase 1A Remedial Investigation/Feasibility Study (RI/FS). The samples were analyzed for the Organic Target Compound List (TCL) in accordance with the Superfund Analytical Methods for Low Concentration Water for Organics Analysis (LCW) dated 6/91 and for the Inorganic Target Analyte List (TAL) in accordance with the U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program Statement of Work for Inorganics Analysis, Multi-Media, Multi-Concentration (CLP SOW ILM02.1) dated 3/90 (revised 9/91). The analyses were performed by CompuChem Laboratories of Research Triangle Park, North Carolina. Samples were collected from seven (7) primary locations. One (1) groundwater monitoring well location was sampled in duplicate for Field Duplicate analysis. The samples for metals analysis were collected as both filtered and unfiltered portions. The field blank is collected by pouring field blank water from a container into the specified sample containers. This field blank was analyzed for the Organic TCL and Inorganic TAL parameters. A portion of the field blank was collected for dissolved metals analysis. This portion was collected by filtering the field blank water through the filtering device and pouring the filtrate into the specified sample containers. The filtered field blank may be considered as a rinsate blank. The Sample Identification Points are summarized in Table 1.

Data validation of organic data was performed in accordance with the USEPA CLP National Functional Guidelines for Organic Data Review Low Concentration Water dated December, 1990 (revised June, 1991). Data validation of metals and cyanide was performed in accordance with the USEPA CLP Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses dated June 13, 1988 and Region III Modifications to the Inorganic Functional Guidelines dated July, 1990. Criteria specified in the Quality Assurance Project Plan (QAPjP) dated August, 1992 were also used in data validation. Data qualifiers are defined in Table 2. Where more than one qualifier for a sample result was warranted, the most predominant or general qualifier was applied to the results. For example, if a positive result needs to be qualified as estimated (J) due to the initial or continuing calibration but is also present in the associated blanks, the result would be qualified with a "B" if the sample result is less than the associated blank action level.

Following data validation and qualification, Golder prepared tables which summarize the analytical data and qualifiers for each sample point. Qualified results are provided in Appendix A of this report.

2.0 ORGANIC DATA

The data were evaluated based upon the following parameters:

* data completeness
  holding times
* GC/MS tuning
  calibration
  blanks
  surrogate recoveries
  laboratory control samples
  matrix spike/matrix spike duplicate
* field duplicates
  internal standard performance
* pesticide instrument performance
* compound identification
* compound quantitation

* All criteria were met for these parameters.

If qualification of data was deemed necessary due to non-conformance with criteria specified for the above parameters, the qualifiers and reasons for qualification are explained in Sections 2.1 through 2.13.

2.1 Data Completeness

The Laboratory produced two reports containing organics data for this Phase of the project. The contents of both reports were found to be complete in accordance with the CLP LCW.

2.2 Holding Times

All samples were extracted and/or analyzed within the required holding time for the Volatile and Semi-volatile fractions.

All samples were initially extracted and analyzed within the required holding time for the Pesticide/PCB fraction; however, two samples required re-extraction and re-analysis due to surrogate recoveries outside of control limits. Sample 870/W/0ED10I/1ARE was re-extracted within the holding time. Sample 870/W/0ED02R/1ARE was re-extracted outside of the holding time. Both the original and re-extraction Pesticide/PCB data were reported for these two samples.

For the re-extracted sample 870/W/0ED02R/1ARE, non-detected results were qualified as estimated detection limits (UJ) and positive results were qualified as estimated values (J).

2.3 GC/MS Tuning

The gas chromatograph/mass spectrometer (GC/MS) tuning performance results were all within USEPA Federal guidelines.

2.4 Calibration

The USEPA Federal guidelines specify that certain criteria must be achieved during the instrument calibration for Volatile and Semi-volatile compounds. These criteria stipulate that:

1. the average and daily response factors (RRF) for each volatile and semi-volatile target analyte must be equal to or greater than 0.05;
2. the percent relative standard deviation (%RSD) for each volatile and semi-volatile target analyte in the initial calibration must be less than or equal to 30%;
3. the percent difference (%D) for each volatile target analyte in the continuing (daily) calibration must be less than or equal to 30%; and
4. the percent difference (%D) for each semi-volatile target analyte in the continuing (daily) calibration must be less than or equal to 25%.

2.4.1 Volatiles

The Average Relative Response factors (RRFs) for 2-Hexanone, 2-Butanone and Acetone from the initial calibrations analyzed on July 27, 1992 were less than 0.05. Likewise, the Daily Relative Response factors (RFs) for these compounds from the continuing calibrations analyzed on August 13 and 14, 1992 were less than 0.05. The positive results for these analytes in the associated groundwater samples required qualification as biased low (L). The non-detected results for these compounds in the associated groundwater samples required qualification as unusable (R).

The Percent Relative Standard Deviations (%RSD) for Chloromethane, Chloroethane, Methylene Chloride, 2-Butanone, 1,2-Dibromoethane, 2-Hexanone, 1,1,2,2-Tetrachloroethane and 1,2-Dibromo-3-chloropropane from the initial calibration analyzed on July 27, 1992 were greater than 30%. The positive results for these analytes in the associated groundwater samples required qualification as estimated values (J). The non-detected results for these analytes in the associated groundwater samples required qualification as estimated quantitation limits (UJ).

The Percent Differences (%D) for 2-Butanone, Chloromethane and Bromomethane from the continuing calibrations analyzed on August 13 and 14, 1992 were greater than 30%. The positive results for these analytes in the associated groundwater samples required qualification as estimated values (J). The non-detected results for these analytes in the associated groundwater samples required qualification as estimated quantitation limits (UJ).

The Average Relative Response factors (RRFs) for 2-Hexanone, 2-Butanone and Acetone from the initial calibrations analyzed on August 17, 1992 were less than 0.05. Likewise, the Daily Relative Response factors (RFs) for these compounds from the continuing calibrations analyzed on August 18 and 19, 1992 were less than 0.05. The positive results for these analytes in the associated groundwater samples required qualification as biased low (L). The non-detected results for these compounds in the associated groundwater samples required qualification as unusable (R).

The Percent Relative Standard Deviations (%RSD) for Chloromethane, Methylene Chloride, Acetone and 2-Butanone from the initial calibration analyzed on August 17, 1992 were greater than 30%. The positive results for these analytes in the associated groundwater samples required qualification as estimated values (J). The non-detected results for these analytes in the associated groundwater samples required qualification as estimated quantitation limits (UJ).

The Percent Differences (%D) for 2-Butanone, Acetone and Bromomethane from the continuing calibrations analyzed on August 18 and 19, 1992 were greater than 30%. The positive results for these analytes in the associated groundwater samples required qualification as estimated values (J). The non-detected results for these analytes in the associated groundwater samples required qualification as estimated quantitation limits (UJ).

2.4.2 Semi-volatiles

The Percent Relative Standard Deviation (%RSD) for 4-Chloroaniline from the initial calibration analyzed on August 16, 1992 was greater than 30%. Likewise, the Percent Differences (%D) for this analytes in the continuing calibrations analyzed on August 16, 19, 20, 23, 24 and 30, 1992 were greater than 25%. The positive results for this analyte in the associated groundwater samples required qualification as estimated values (J). The non-detected results for this analyte in the associated groundwater samples required qualification as estimated quantitation limits (UJ).

The Percent Difference (%D) for Dibenz(a,h)anthracene from the continuing calibration analyzed on August 23, 1992 was greater than 25%. The non-detected results for this analyte in groundwater samples 870/W/0ED02R/1A, 870/W/0ED09R/1A, 870/W/0ED10I/1A and 870/W/EU14D/1A required qualification as estimated quantitation limits (UJ).

The Percent Difference (%D) for Pyrene from the continuing calibration analyzed on August 30, 1992 was greater than 25%. The non-detected results for this analyte in groundwater samples 870/W/0ED02R/FD and 870/W/0ED05R/1A required qualification as estimated quantitation limits (UJ).

2.4.3 Pesticides and Polychlorinated Biphenyls (PCBs)

The Percent Relative Standard Deviation (%RSD) for beta-BHC from the initial calibration analyzed July 22, 1992 on the RTX-1701 column was greater than 20%. Non-detected results for this compound in 870/W/0ED08R/1A and the associated quality control samples did not require qualification.

The Percent Relative Standard Deviations (%RSD) for Dieldrin and Methoxychlor from the initial calibration analyzed August 16, 1992 on the RTX-1701 column were greater than 20%. The positive results for Dieldrin in 870/W/0ED12I/1A and 870/W/0ED02R/FD required qualification as estimated values (J). Non-detected results for these compounds in 870/W/0ED02R/1A, 870/W/0ED02R/FD, 870/W/0ED12I/1A, 870/W/0ED10I/1A, 870/W/0ED09R/1A, 870/W/0EU14D/1A and 870/W/0ED05R/1A did not require qualification.

The Percent Relative Standard Deviation (%RSD) for beta-BHC from the initial calibration analyzed August 21, 1992 on the RTX-1701 column was greater than 20%. The non-detected result for this compound in 870/W/0ED10I/1ARE did not require qualification.

The Percent Relative Standard Deviation (%RSD) for Endosulfan II from the initial calibration analyzed August 27, 1992 on the DB-608 column was greater than 20%. The positive result for this compound in 870/W/0ED02R/1ARE required qualification as an estimated value (J).

The Percent Relative Standard Deviations (%RSD) for Dieldrin and Methoxychlor from the initial calibration analyzed August 27, 1992 on the RTX-1701 column were greater than 20%. Non-detected results for these compounds in 870/W/0ED02R/1ARE did not require qualification.

2.5 Blanks

In evaluating the contaminants in the laboratory method blanks, the data validator applied the appropriate action levels for common laboratory contaminants (as

specified in the USEPA Region III Data Validation Guidelines) to the group of samples to which a blank applied. In evaluating the contaminants in the field blanks and the trip blanks, the data validator applied the appropriate action levels for field blanks and trip blanks to the samples of an associated media. Action levels for Pesticide/PCB method blanks were applied on an individual sample batch basis.

Please note that sample volumes, percent moisture and dilution factors have been taken into consideration when applying the appropriate blank action levels to the samples.

2.5.1 Volatiles

Acetone and Methylene Chloride were in the method blanks, field blank and trip blanks associated with the groundwater samples at various concentrations above and below the Contract Required Quantitation Limits (CRQLs). These compounds are considered common laboratory contaminants; the action levels determined for Acetone and Methylene Chloride were ten times (10x) the highest concentration found in any of the associated blanks. For all of the groundwater samples, positive results less than the action levels were qualified as not detected substantially above the level reported in the blank (B). Positive results above the action levels and non—detected results did not require qualification.

Analysis of the trip blank 870/W/00TB05/1A revealed the presence of low concentrations of 16 volatile organic analytes as well as Acetone and Methylene Chloride. Discussion with Senior laboratory personnel indicates that the presence of these analytes in the trip blank may be attributed to a laboratory error where the analyst used the incorrect syringe to add surrogates and or internal standards to the sample. This trip blank was not used to qualify the associated groundwater sample 870/W/0ED12I/1A since the target analytes present in the trip blank were not found to be present in the sample except for Methylene Chloride and Acetone. Methylene Chloride and Acetone present in the sample were qualified based upon the results of laboratory method blanks and the field blank.

2.5.2 Semi-volatiles

Di-n-butylphthalate and bis(2-Ethylhexyl)phthalate were detected in the semi-volatile method preparation blanks associated with the groundwater samples at concentration which were at or below the CRQLs. The semi-volatile field blank revealed the presence of these two analytes as well as the presence of Phenol and 4-Chloroaniline. The action levels determined for phthalate esters were ten times the highest concentration found in any of the associated blanks. The action levels for the remaining compounds was five times the concentration detected in the field blank. Positive results for these analytes less than the respective action levels were qualified as not detected substantially above the levels reported in the blank

(B). Non-detected results and positive results above the action levels did not require qualification.

2.5.3 Pesticides/PCBs

Heptachlor, Methoxychlor and gamma-Chlordane were detected in the various pesticide preparation blanks associated with the initial extraction of the groundwater samples at concentration which were below the CRQLs. The Pesticide/PCB field blank revealed the presence of gamma-BHC. Action levels were determined for each blank. The action level for each analyte was set at five times the concentration found in the blank and the action levels were used to qualify only those samples associated with a particular blank. Positive results for these analytes less than the respective action levels were qualified as not detected substantially above the levels reported in the blank (B). Non-detected results and positive results above the action levels did not require qualification.

Heptachlor, alpha-BHC, gamma-BHC, Endosulfan I, Dieldrin, Endosulfan II, Methoxychlor, 4,4'-DDD, 4,4'-DDT, alpha-Chlordane and gamma-Chlordane were detected in the pesticide preparation blank associated with the re-extraction of the groundwater sample 870/W/0ED02R/1A at concentration which were below the CRQLs. The action level for each analyte was set at five times the concentration found in the blank and the action levels were used to qualify only the re-extracted sample 870/W/0ED02R/1ARE. Positive results for these analytes less than the respective action levels were qualified as not detected substantially above the levels reported in the blank (B). Non-detected results and positive results above the action levels did not require qualification.

2.6 Surrogate Recoveries

The surrogate recoveries from the Volatile and Semi-volatile analyses of the groundwater samples met the Contract Required Recovery range criteria specified in the CLP LCW.

The surrogate recoveries from the Pesticide/PCB analyses of samples 870/W/0ED02R/1A, 870/W/0ED02R/FD and 870/W/0ED10I/1A did not meet the Contract Required Recovery range criteria specified in the CLP LCW for either surrogate. Samples 870/W/0ED02R/1A and 870/W/0ED10I/1A were re-extracted and re-analyzed. Re-analysis of these samples revealed similar surrogate recoveries to those reported for the original analysis. Sample 870/W/0ED02R/FD was not re-extracted as there was insufficient sample for re-extraction. Since this sample is the field duplicate of 87/W/0ED02R/1A, matrix interference has been demonstrated. The positive results reported for Pesticides in these samples were qualified as estimated values (J). The non-detected results for Pesticides and PCBs in these samples were qualified as estimated quantitation limits (UJ).

Samples 870/W/0ED08R/1A, 870/W/0ED08R/1AMS, 870/W/0ED08R/1AMSD and 870/W/0ED09R/1A had mixed high and low surrogate recoveries reported for Tetrachloro-meta-xylene (TCMX). The Decachlorobiphenyl (DCB) surrogate recoveries were acceptable. The positive results for Pesticides in these samples were qualified as estimated values (J).

2.7 Laboratory Control Sample

The Laboratory Control Sample (LCS) recoveries from the Volatile analysis were within the Contract Required Recovery ranges specified in the LCW.

The LCS recoveries for 4-Chloroaniline, 2,4-Dinitrotoluene and Diethylphthalate did not meet the Contract Required Recovery ranges specified in the LCW. The recovery for 4-Chloroaniline was greater than 140%. Positive results in the samples should have been qualified as biased high (K). However, since the initial and continuing calibration control criteria for this analyte were not met as previously described in Section 2.4.2, the positive sample results were qualified as estimated values (J). The recoveries for the remaining two analytes were only slightly less than the recovery ranges specified in the LCW. Positive results for these analytes were qualified as estimated values (J). It should be noted that the LCW states that the EPA may expand the control limits for the LCS if the EPA determines that the limits are too restrictive.

The LCS recovery for Endosulfan Sulfate was greater than 140% and did not meet the Contract Required Recovery range specified in the LCW. Positive results for this analyte in the groundwater samples were qualified as biased high (K). It should be noted that the LCW states that the EPA may expand the control limits for the LCS if the EPA determines that the limits are too restrictive.

2.8 Matrix Spike/Matrix Spike Duplicate

Sample 870/W/0ED08R/1A was used for Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis for the groundwater samples.

The Matrix Spike (MS) and Matrix Spike Duplicate (MSD) recoveries from the Volatile and Pesticide/PCB analyses were within the Contract Required Recovery (CRR) ranges specified for the LCS in the LCW.

The MS and/or MSD recoveries of Phenol, bis(2-Chloroethyl)ether, 2-Chlorophenol, Hexachloroethane, 4-Chloroaniline, 2,4,6-Trichlorophenol, Diethylphthalate, Hexachlorobenzene, N-Nitrosodiphenylamine and Benzo(a)pyrene were greater than the CRR ranges specified for the LCS in the LCW. Positive results for these analytes in the unspiked aliquot of this sample required qualification as biased high (K). Non-detected results for these compounds in the unspiked aliquot of this sample did not require qualification.

2.9 Field Duplicates

One (1) field duplicate sample 870/W/0ED02R/FD was collected and analyzed with the groundwater samples. Region III guidelines do not specify Relative Percent Difference (RPD) criteria. This quality control sample was not used to qualify data.

2.10 Internal Standard Performance

The Internal Standard Performance criteria for Volatile analysis were met for all of the samples and associated quality control samples.

A discrepancy exists between the data validation guidelines and the CLP LCW regarding the Internal Standard Performance criteria for Semi-volatile analysis. The Internal Standard Performance criteria in the CLP LCW for the sample internal standard area count is -50% to +100% of the internal standard area count in the corresponding continuing calibration standard. The data validation guidelines specify that the criteria for the sample internal standard area count is -40% to +40% of the internal standard area count in the corresponding continuing calibration standard.

The Internal Standard Performance criteria specified in the validation guidelines were not met for 1,4-Dichlorobenzene-d4, Naphthalene-d8 and Acenaphthene-d10 for sample 870/W/0ED02R/1A. The sample had internal standard area counts greater than the upper control limit (+40%). The sample was not re-analyzed as the area counts met the criteria specified by the CLP LCW. The positive results for analytes quantitated using these internal standards required qualification as estimated values (J). The non-detected results for analytes quantitated using these internal standards did not require qualification.

The Internal Standard Performance criteria specified in the validation guidelines were not met for 1,4-Dichlorobenzene-d4, Naphthalene-d8, Acenaphthene-d10, Phenanthrene-d10, Chrysene-d12 and Perylene-d12 for sample 870/W/0ED09R/1A. The sample had internal standard area counts greater than the upper control limit (+40%). The sample was not re-analyzed as the area counts met the criteria specified by the CLP LCW. The positive results for analytes quantitated using these internal standards required qualification as estimated values (J). The non-detected results for analytes quantitated using these internal standards did not require qualification.

The Internal Standard Performance criteria specified in the validation guidelines were not met for Chrysene-d12 and Perylene-d12 for sample 870/W/0EU14D/1A. The sample had internal standard area counts greater than the upper control limit (+40%). The sample was not re-analyzed as the area counts met the criteria specified by the CLP LCW. The positive results for analytes quantitated using

these internal standards required qualification as estimated values (J). The non-detected results for analytes quantitated using these internal standards did not require qualification.

2.11 Pesticide Instrument Performance

All Contract Required criteria from the CLP LCW were met regarding the Resolution Check Mix, Retention Time Windows, DDT and Endrin Degradation and TCMX and DCB Retention Time Checks.

2.12 Compound Identification

The USEPA CLP LCW and the Region III guidelines specify that certain criteria must be satisfied to positively identify a peak as a Target Compound List Volatile or Semi-volatile compound. These criteria are:

1) the target compound peak in the sample chromatogram must elute within +0.06 Relative Retention Time (RRT) units of the RRT of that compound in the continuing calibration standard; and
2) the mass spectrum of the compound in the sample must correlate with the mass spectrum of that compound in a current laboratory-generated standard such that:

a) all ions present in the standard mass spectrum at a relative intensity greater than 25% must be present in the sample spectrum;
b) the relative intensities of these ions must agree within +20% between the standard and sample spectra; and
c) ions greater than 25% in the sample spectrum but not present in the standard spectrum must be explained.

If all of the above criteria could not be satisfied, but in the technical judgement of the mass spectral interpretation specialist the identification of the compound is correct, the Laboratory is instructed to report the compound.

The identification of Volatile and Semi-volatile target compounds has been checked for all samples. Where there were questions concerning the identification of compounds, the data validator contacted the Laboratory. The compounds in question were checked by a Senior GC/MS analyst.

The data validation revealed that the mass spectrum of the peak identified as Chloroethane in sample 870/W/0ED10I/1A did not correlate well with the standard spectrum for this analyte. The positive result for Chloroethane in this sample was qualified as a tentative identification (N) based upon the sample spectrum. This sample required re-analysis at a dilution. Chloroethane was detected and reported in the re-analysis.

The USEPA CLP LCW and the Region III guidelines specify that certain criteria must be satisfied to positively identify a peak as a Target Compound List Pesticide/PCB compounds. These criteria are:

1) positive presence of a TCL must be confirmed by analysis on a dissimilar chromatographic column;
2) the retention times of reported compounds must fall within the calculated retention time windows for both of the chromatographic columns;
3) the retention times and relative peak height ratios of major component peaks for the multi-response pesticides and PCBs in the sample must be compared to those in the calibration standard; and
4) confirmation by GC/MS must be performed if the concentration of an individual pesticide was present in the final sample extract in excess of 10 nanograms per microliter (ng/ul).

The identification of Pesticides and PCB target compounds has been checked for all samples. Pesticide and PCB compounds were not detected in the groundwater samples at concentrations greater than the CRQLs.

2.13 Compound Quantitation

The quantitation of Volatile, Semi-volatile and Pesticide/PCB target compounds has been checked for all samples. Where there were questions concerning the concentrations reported, the data validator contacted the Laboratory. The compounds in question were checked by a Senior GC/MS or GC analyst.

3.0 INORGANIC DATA

The data was evaluated based upon the following parameters:

* data completeness
  holding times and preservation
* calibration verification
  blanks
* ICP interference check sample
  matrix spike recoveries
  laboratory and field duplicates
* laboratory control sample
  furnace atomic absorption results
* serial dilution results
* detection limit results
* sample results verification

* All criteria were met for these parameters.

If qualification of data was deemed necessary due to non-conformance with criteria specified for the above parameters, the qualifiers and reasons for qualification are explained in Sections 3.1 through 3.12.

3.1 Data Completeness

The Laboratory produced two reports containing data for these samples. The report containing data for Total metals required revision due to the re-analysis of sample 870/W/0ED08R/1A for Antimony (refer to Section 3.12). The corrected and additional pages were incorporated into the report.

3.2 Holding Times

All samples were prepared and analyzed for Cyanide, Arsenic, Thallium, Selenium, Lead, Mercury and Inductively Coupled Plasma (ICP) metals within the required holding time. The Cyanide samples collected from 870/W/0ED08R/1A, 870/W/0ED09R/1A and 870/W/0EU14D/1A were received at the laboratory at a pH less than 12. The laboratory preserved the samples upon receipt and subsequently analyzed the samples. The non-detected results for this analyte in these samples required qualification as estimated detection limits (UJ).

3.3 Calibration Verification

All recovery criteria for the Initial and Continuing Calibration Verification standards were met for Cyanide, Arsenic, Thallium, Selenium, Lead, Mercury and ICP metals.

3.4 Blanks

In evaluating the contaminants in the laboratory preparation blanks (PB), the Initial Calibration Blanks (ICB), and the Continuing Calibration Blanks (CCB), the data validator determined the appropriate action levels (as specified in the USEPA Region III Data Validation Guidelines) from the associated blank having the highest level of contamination and applied these action levels to all of the associated samples within the analytical sequence. In evaluating the contaminants in the field/rinsate blanks, the data validator applied the results from the filtered field (rinsate) blank to the filtered samples and the results from the unfiltered field blank to the unfiltered samples. When the same contaminant was present in the field/rinsate blank as in the preparation and/or analysis blanks, the highest level of contamination was used to determine the action level.

Please note that sample volumes, percent solids and dilution factors have been taken into consideration when applying the appropriate blank action levels to the samples.

Various contaminants were determined to be present in the blanks analyzed with the unfiltered groundwater samples. Aluminum, Calcium, Manganese, Sodium and Zinc were detected at various concentrations in the blanks. Action levels were determined for each analyte. Positive results in the samples greater than the Instrument Detection Limit (IDL) but less than the action levels required qualification with a "B" flag indicating that the analyte was not detected substantially above the level reported in the associated blanks.

Various contaminants were determined to be present in the blanks analyzed with the filtered groundwater samples. Aluminum, Calcium, Manganese, Sodium and Zinc were detected at various concentrations in the blanks. Action levels were determined for each analyte. Positive results in the samples greater than the Instrument Detection Limit (IDL) but less than the action levels required qualification with a "B" flag indicating that the analyte was not detected substantially above the level reported in the associated blanks.

3.5 ICP Interference Check Sample

All recovery criteria for the Interference Check Sample (ICS) AB standard were met.

3.6 Matrix Spike Recoveries

Sample 870/W/0ED08R/1A was used for Matrix Spike (MS) and Matrix Spike Duplicate (MSD) analysis for both total and dissolved metals. There were several analytes which did not meet the Contract Required Recovery (CRR) criteria as specified in the CLP SOW.

The MS recovery of Thallium for the total metals batch was less than 75% but greater than 30%. The non-detected results for this analyte in the groundwater samples required qualification as biased low detection limits (UL).

The MS/MSD recoveries of Manganese and Antimony did not meet the 75% - 125% criteria for the total metals batch because the sample concentrations were greater than the spike concentrations by at least a factor of five. Per the validation guidelines, spike recovery limits do not apply when the sample concentration exceeds the spike concentration by a factor of four or more. The results for these analytes in the surface water samples did not require qualification.

The MS/MSD recoveries of Selenium and Thallium for the dissolved metals batch was less than 75% but greater than 30%. The non-detected results for these analytes in the groundwater samples required qualification as biased low detection limits (UL).

3.7 Duplicates

3.7.1 Laboratory Duplicates

Groundwater sample 870/W/0ED08R/1A was used as the Laboratory Duplicate for these samples. In accordance with the QAPjP, the Relative Percent Difference (RPD) criterion used to assess the data was $\pm$20% for aqueous samples.

The concentration of Total Iron in the aqueous Laboratory Duplicate was less than five times the Contract Required Detection Limits (5xCRDL). The absolute difference between the primary and duplicate sample was greater than the CRDL for Iron. The positive results for Total Iron in the groundwater samples were qualified as estimated (J). The non-detected result for Total Iron in the field blank did not require qualification.

The RPD criteria were met for all detected dissolved analytes in the Laboratory Duplicate for the groundwater samples.

3.7.2 Field Duplicates

One of the groundwater samples was collected in duplicate yielding Field Duplicate sample 870/W/0ED02R/FD. In accordance with the QAPjP, the Relative Percent Difference (RPD) criterion used to assess the data was $\pm$30% for aqueous samples.

The concentration of Total Zinc in the aqueous Field Duplicate was less than five times the Contract Required Detection Limits (5xCRDL). The absolute difference between the primary and duplicate sample was greater than the two times the CRDL for Zinc. The positive results for Total Zinc in the groundwater samples were qualified as estimated (J).

The concentration of Dissolved Zinc in the aqueous Field Duplicate was less than five times the Contract Required Detection Limits (5xCRDL). The absolute difference between the primary and duplicate sample was greater than the two times the CRDL for Zinc. The positive results for Dissolved Zinc in the groundwater samples were qualified as estimated (J).

The RPD criteria for Dissolved Iron in the aqueous Field Duplicate was greater than 30%. The positive results for Dissolved Iron in the groundwater samples were qualified as estimated (J). The non-detected results for Dissolved Iron in the groundwater samples did not require qualification.

3.8 Laboratory Control Sample

The aqueous Laboratory Control Sample (LCS) was prepared and analyzed for the target analytes in each aqueous batch of samples. The recovery of each analyte was within the USEPA control limits of $\pm$20% for the aqueous LCS as specified in the CLP SOW.

3.9 Furnace Atomic Absorption Results

Total Thallium analysis by Graphite Furnace Atomic Absorption (GFAA) was performed for all groundwater samples. The post digestion spike recoveries for 870/W/0ED02R/1A, 870/W/0ED02R/FD, 870/W/0ED05R/1A, 870/W/0ED08R/1A, 870/W/0ED10I/1A and 870/W/0EU14D/1A were less than the 85%-115% criteria. The non-detected results for this analyte in these samples required qualification as biased low detection limits (UL).

Total Selenium analysis by Graphite Furnace Atomic Absorption (GFAA) was performed for all groundwater samples. The post digestion spike recoveries for 870/W/0ED02R/1A, 870/W/0ED02R/FD, 870/W/0ED05R/1A, 870/W/0ED09R/1A, 870/W/0ED10I/1A, 870/W/0ED12I/1A and 870/W/0EU14D/1A were less than the 85%-115% criteria. The non-detected results for this analyte in these samples required qualification as biased low detection limits (UL).

Total Arsenic analysis by Graphite Furnace Atomic Absorption (GFAA) was performed for all groundwater samples. The post digestion spike recovery for 870/W/0EU14D/1A exceeded the 85%-115% criteria. The non-detected result for this analyte in this sample did not require qualification.

Dissolved Thallium analysis by Graphite Furnace Atomic Absorption (GFAA) was performed for all groundwater samples. The post digestion spike recoveries for 870/W/0ED02R/1A, 870/W/0ED02R/FD, 870/W/0ED08R/1A, 870/W/0ED09R/1A, 870/W/0ED10I/1A, 870/W/0ED12I/1A, 870/W/0EU14D/1A and the field blank were less than the 85%-115% criteria. The non-detected results for this analyte in these samples required qualification as biased low detection limits (UL).

Dissolved Lead analysis by Graphite Furnace Atomic Absorption (GFAA) was performed for all groundwater samples. The post digestion spike recovery for 870/W/0ED02R/1A, 870/W/0ED02R/FD, 870/W/0ED05R/1A, 870/W/0ED08R/1A, 870/W/0ED09R/1A, 870/W/0ED10I/1A, 870/W/0ED12I/1A, 870/W/0EU14D/1A and the field blank were less than the 85%-115% criteria. The non-detected results for this analyte in these samples required qualification as biased low detection limits (UL).

Dissolved Selenium analysis by Graphite Furnace Atomic Absorption (GFAA) was performed for all groundwater samples. The post digestion spike recovery for 870/W/0ED02R/1A, 870/W/0ED02R/FD, 870/W/0ED05R/1A, 870/W/0ED08R/1A, 870/W/0ED09R/1A, 870/W/0ED12I/1A, 870/W/0EU14D/1A and the field blank were less than the 85%-115% criteria. The non-detected results for this analyte in these samples required qualification as biased low detection limits (UL).

3.10 Serial Dilution Results

All criteria were met for the Serial Dilution analyses performed for the aqueous analytical batches.

3.11 Detection Limit Results

All criteria for Instrument Detection Limits and Reporting Requirements were met by the Laboratory for Cyanide, Arsenic, Thallium, Selenium, Lead, Mercury, and ICP metals.

3.12 Sample Results

All sample results were within the linear range for ICP analysis and within the calibration range for Cyanide analysis, Graphite Furnace Atomic Absorption analysis and Mercury analysis.

Sample 870/W/0ED08R/1A was originally reported to contain Antimony at a concentration greater than the CRDL. There was no evidence of this analyte in the sample duplicate or the MS/MSD. The laboratory was contacted and re-prepared and analyzed the sample for Antimony. The re-analysis shows that Antimony is not present in this sample. The laboratory attributed the presence of Antimony in the original analysis to contamination which occurred in the laboratory.

Samples 870/W/0ED02R/1A, 870/W/0ED02R/FD, 870/W/0ED05R/1A and 870/W/0ED10I/1A required analysis at a 1:10 dilution for Thallium due to matrix interference.

Sample 870/W/0ED10I/1A required analysis at a 1:10 dilution for Selenium due to matrix interference.

4.0 SUMMARY

Validation of the Organic and Inorganic data collected for the Phase 1A RI/FS from the Elizabethtown Landfill was performed in accordance with Federal and Regional data validation guidelines, where available. Section 2.0 discusses the conformance of Organic data to the criteria specified in the CLP LCW dated 6/91 (Low Concentration Organics) and the data validation guidelines. Section 3.0 discusses the conformance of Inorganic data to the criteria specified in the CLP SOW dated 3/90 (revised 9/91) and the data validation guidelines.

Overall, the data required qualification due to some quality control criteria which were not achieved, but the majority of the data may be deemed usable for the RI/FS. Although a positive result was qualified as estimated, biased high or biased low, the analyte should be considered present. Similarly, a non-detected result which was qualified as an estimated or biased low quantitation/detection limit should be considered not present for the purposes of the RI/FS, although the limit itself may not be precise.

TABLE 1

Sample Point Identifications

GROUNDWATER SAMPLES

Sample ID	Analyses
870/W/0ED02R/1A	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide, Dissolved Metals
870/W/0ED02R/RE	Volatile Organics, Pesticides/PCBs
870/W/0ED02R/FD	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide, Dissolved Metals
870/W/0ED02R/FR	Volatile Organics
870/W/0ED05R/1A	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide, Dissolved Metals
870/W/0ED05R/RE	Volatile Organics
870/W/0ED08R/1A	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide, Dissolved Metals
870/W/0ED09R/1A	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide, Dissolved Metals
870/W/0ED09R/RE	Volatile Organics
870/W/0ED10I/1A	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide, Dissolved Metals
870/W/0ED10I/RE	Volatile Organics, Pesticides/PCBs
870/W/0ED12I/1A	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide, Dissolved Metals

TABLE 1

Sample Point Identifications

GROUNDWATER SAMPLES

Sample ID	Analyses
870/W/0EU14D/1A	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide, Dissolved Metals

QUALITY CONTROL SAMPLES

Sample ID	Analyses
870/W/0ED08R/MS	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide, Dissolved Metals
870/W/0ED08R/SD	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide, Dissolved Metals
870/X/0001FB/1A	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide, Dissolved Metals
870/W/00TB01/1A	Volatile Organics
870/W/00TB02/1A	Volatile Organics
870/W/00TB03/1A	Volatile Organics
870/W/00TB04/1A	Volatile Organics
870/W/00TB05/1A	Volatile Organics

TABLE 2

Data Qualifiers

A	-	The data is acceptable; identification is confirmed.
U	-	The analyte was tested for but was not detected. The associated numerical value is either the sample quantitation limit or the sample detection limit.
B	-	The analyte was also detected in one or more of the associated quality control blanks (laboratory, field and/or trip blanks). The compound was not detected substantially above the level reported in the associated blanks.
R	-	Reject data due to quality control criteria. The data are unusable (analyte may or may not be present in the sample). Resampling and/or re-analysis is necessary for verification.
N	-	Tentative identification; consider analyte present. Special methods may be necessary to confirm its presence or absence in future sampling events.
J	-	The analyte is present. The associated numerical value is an estimated quantity and may not be accurate or precise.
K	-	The analyte is present. The associated numerical value may be biased high. The actual value is expected to be lower.
L	-	The analyte is present The associated numerical value may be biased low. The actual value is expected to be higher.
UJ	-	The analyte was tested for but was not detected. The sample quantitation limit or the sample detection limit is estimated and may be inaccurate or imprecise.
UL	-	The analyte was tested for but was not detected. The sample quantitation limit or the sample detection limit is estimated but is probably higher.
Q	-	There is no analytical result for this analyte.

Sediment, Soil, and Surface Water

CLP DATA VALIDATION NARRATIVE SURFACE WATER, SEDIMENT & SOIL

1.0 INTRODUCTION

Golder Associates, Inc. (Golder) has performed a data validation of the analytical data from the Phase 1A surface water, sediment and soil samples collected August 6 through 14, 1992 at the Elizabethtown Landfill in Lancaster County, Pennsylvania. The samples were collected in support of the Phase 1A Remedial Investigation/Feasibility Study (RI/FS). The samples were analyzed for the Organic Target Compound List (TCL) in accordance with the U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program Statement of Work for Organics Analysis, Multi-Media, Multi-Concentration (CLP SOW OLM01.8) dated 3/90 (revised 8/91) and for the Inorganic Target Analyte List (TAL) in accordance with the Contract Laboratory Program Statement of Work for Inorganics Analysis, Multi-Media, Multi Concentration (CLP SOW ILM02.1) dated 3/90 (revised 9/91). The analyses were performed by CompuChem Laboratories of Research Triangle Park, North Carolina. Samples were collected from eight (8) primary locations (1 surface water point, 6 soil points and 1 sediment point). One (1) sediment location was sampled in duplicate for Field Duplicate analysis. The soil and sediment samples were analyzed for total metals. Both filtered and unfiltered portions of the surface water sample were collected for metals analysis. A rinsate blank was collected with the soil samples by pouring field blank water through the sampling equipment and collecting the water in specified containers for the analysis of the TCL and TAL parameters. The Sample Identification Points are summarized in Table 1.

Data validation of organic data was performed in accordance with the USEPA CLP National Functional Guidelines for Organic Data Review (dated December, 1990 and revised June, 1991) and the Region III Modifications to National Functional Guidelines for Organic Data Review, Multi-Media, Multi-Concentration (dated June, 1992). Data validation of metals and cyanide was performed in accordance with the USEPA CLP Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses (dated June 13, 1988) and Region III Modifications to the Inorganic Functional Guidelines dated July, 1990. Criteria specified in the Quality Assurance Project Plan (QAPjP) dated August, 1992 were also used in data validation. Data qualifiers are defined in Table 2. Where more than one qualifier for a sample result was warranted, the most predominant or general qualifier was applied to the results. For example, if a positive result needs to be qualified as estimated (J) due to the initial or continuing calibration but is also present in the associated blanks, the result would be qualified with a "B" if the sample result is less than the associated blank action level.

Following data validation and qualification, Golder prepared tables which summarize the analytical data and qualifiers for each sample point. Qualified results are provided in Appendix A of this report.

2.0 ORGANIC DATA

The data were evaluated based upon the following parameters:

* data completeness
* holding times
* GC/MS tuning
  calibration
  blanks
  surrogate recoveries
  matrix spike/matrix spike duplicate
* field duplicates
  internal standard performance
* pesticide instrument performance
* compound identification
* compound quantitation

* All criteria were met for these parameters.

If qualification of data was deemed necessary due to non-conformance with criteria specified for the above parameters, the qualifiers and reasons for qualification are explained in Sections 2.1 through 2.12.

2.1 Data Completeness

The Laboratory produced two reports containing data from this project. Some information was missing from the original data packages; however, this information was provided by the Laboratory upon request.

2.2 Holding Times

All samples were extracted and/or analyzed within the required holding time for the Volatile, Semi-volatile and Pesticide/PCB fractions.

2.3 GC/MS Tuning

The gas chromatograph/mass spectrometer (GC/MS) tuning performance results for the Volatile and Semi-volatile analyses were all within USEPA Region III guidelines.

2.4 Calibration

The USEPA Federal and Region III guidelines specify that certain criteria must be achieved during the instrument calibration for Volatile and Semi-volatile compounds. These criteria stipulate that:

1. the average and daily response factors (RRF) for each volatile and semi-volatile target analyte must be equal to or greater than 0.05;
2. the percent relative standard deviation (%RSD) for each volatile and semi-volatile target analyte in the initial calibration must be less than or equal to 30%; and
3. the percent difference (%D) for each volatile and semi-volatile target analyte in the continuing (daily) calibration must be less than or equal to 25%.

2.4.1 Volatiles

The Percent Relative Standard Deviations (%RSD) for Methylene Chloride, 2-Hexanone, 2-Butanone and 4-Methyl-2-Pentanone from the initial calibration analyzed on August 2, 1992 were greater than 30%. The positive results for Methylene Chloride in the surface water sample and associated quality control samples required qualification as estimated values (J). The non-detected results for the remaining analytes in these aqueous samples did not require qualification.

The Percent Differences (%D) for Chloromethane, 2-Hexanone, Chloroethane, Acetone, 2-Butanone, 4-Methyl-2-Pentanone, Vinyl Chloride and trans-1,3-Dichloropropene from the continuing calibration analyzed on August 10, 1992 were greater than 25%. The non-detected results for these analytes in the surface water sample and the associated quality control samples did not require qualification.

The Percent Difference (%D) for 2—Hexanone from the continuing calibration analyzed on August 18, 1992 was greater than 25%. The non-detected results for this analyte in rinsate blank and trip blank associated with the soil samples did not require qualification.

The Percent Relative Standard Deviations (%RSD) for Methylene Chloride and Acetone from the initial calibration analyzed on August 12, 1992 were greater than 30%. The positive results for these analytes in the sediment and soil samples required qualification as estimated values (J).

The Percent Differences (%D) for Chloromethane, Bromomethane, Vinyl Chloride and Acetone from the continuing calibration analyzed on August 13, 1992 were greater than 25%. The positive results for Acetone in the associated sediment and soil samples required qualification as estimated values (J). The non-detected results for the remaining analytes did not require qualification.

The Percent Differences (%D) for trans-1,3-Dichloropropene and Chloromethane from the continuing calibrations analyzed on August 18, 1992 were greater than 25%. The non-detected results for these analytes in the associated soil samples did not require qualification.

2.4.2 Semi-volatiles

The Percent Differences (%D) for 2,2'-oxybis(1-Chloropropane), 2-Nitroaniline, 3-Nitroaniline, 2,6-Dinitrotoluene, 2,4-Dinitrophenol, 4-Nitrophenol, 4-Nitroaniline, Butylbenzylphthalate, bis(2-Ethylhexyl)phthalate and Di-n-octylphthalate from the continuing calibration analyzed on August 12, 1992 were greater than 25%. The non-detected results for these analytes in surface water sample and the associated quality control samples did not require qualification.

The Percent Differences (%D) for 4-Nitrophenol, Pyrene, 4-Nitroaniline, Butylbenzylphthalate, Di-n-octylphthalate, Benzo(k)fluoranthene and bis(2-Ethylhexyl)phthalate from the continuing calibration analyzed on August 19, 1992 were greater than 25%. The positive results for bis(2-Ethylhexyl)phthalate in soil samples 870/B/00SS02/1A, 870/B/00SS03/1A, 870/B/00SS04/1A and 870/B/00SS05/1A and the positive results for Pyrene and Benzo(k)fluoranthene in soil sample 870/B/00SS03/1A required qualification as estimated values (J). The non-detected results for the remaining analytes in these soil samples did not require qualification.

The Percent Relative Standard Deviations (%RSD) for 3—Nitroaniline and 2,4-Dinitrophenol from the initial calibration analyzed on July 15, 1992 were greater than 30%. The non-detected results for these analytes in the re-analysis of soil sample 870/B/00SS03/1A did not require qualification.

The Percent Differences (%D) for 2,2'-oxybis(1-Chloropropane), 4-Chloroaniline, 4-Chloro-3-methylphenol, Hexachlorocyclopentadiene, 2,4—Dinitrotoluene, 4—Nitroaniline, N-Nitrosodiphenylamine, 4-Bromophenyl-phenylether, Hexachlorobenzene and 3,3'-Dichlorobenzidine from the continuing calibration analyzed on August 25, 1992 were greater than 25%. The non-detected results for these analytes in the re-analysis of soil sample 870/B/00SS03/1A did not require qualification.

The Percent Relative Standard Deviation (%RSD) for 4—Chloroaniline from the initial calibration analyzed on June 8, 1992 was greater than 30%. The non-detected result for this analyte in soil sample 870/B/00SS01/1A did not require qualification.

The Percent Difference (%D) for 2,2'-oxybis(1-Chloropropane) from the continuing calibration analyzed on August 17, 1992 was greater than 25%. The non-detected result for this analyte in soil sample 870/B/00SS01/1A did not require qualification.

The Percent Relative Standard Deviations (%RSD) for 4-Chloroaniline, 4-Nitroaniline, 3,3'-Dichlorobenzidine, 3-Nitroaniline and 2,4-Dinitrophenol from the

initial calibration analyzed on May 5, 1992 were greater than 30%. The non-detected results for these analytes in the sediment sample 870/B/0SEDP1/1A and the field duplicate 870/B/0SEDP1/FD did not require qualification.

The Percent Differences (%D) for 3,3'—Dichlorobenzidine, Carbazole, N-Nitrosodiphenylamine, 2,4-Dinitrophenol and 3—Nitroaniline from the continuing calibration analyzed on August 12, 1992 were greater than 25%. The non-detected results for these analytes in sample 870/B/0SEDP1/1A did not require qualification.

The Percent Differences (%D) for 2,2'-oxybis(1-Chloropropane), 3-Nitroaniline, 2,4-Dinitrophenol, 4-Nitroaniline, Carbazole, 4,6-Dinitro-2-methylphenol and 3,3'-Dichlorobenzidine from the continuing calibration analyzed on August 13, 1992 were greater than 25%. The non-detected results for these analytes in sample 870/B/0SEDP1/1A did not require qualification.

2.4.3 Pesticides and Polychlorinated Biphenyls (PCBs)

The Percent Relative Standard Deviation (%RSD) for beta-BHC from the initial calibration analyzed July 22, 1992 on the RTX-1701 column was greater than 20%. The non-detected results for this analyte in surface water sample 870/S/00SWP1/1A and the associated quality control samples did not require qualification.

The Percent Relative Standard Deviation (%RSD) for beta-BHC from the initial calibration analyzed July 22, 1992 on the RTX-1701 column was greater than 20%. The non-detected results for this analyte in soil samples 870/B/00SS02/1A, 870/B/00SS03/1A, 870/B/00SS04/1A and 870/B/00SS05/1A did not require qualification.

The Percent Relative Standard Deviation (%RSD) for Methoxychlor from the initial calibration analyzed July 22, 1992 on the RTX-1701 column was greater than 20%. The non-detected results for this analyte in sediment samples 870/B/0SEDP1/1A and 870/B/0SEDP1/FD did not require qualification.

The Percent Relative Standard Deviations (%RSD) for Dieldrin and Methoxychlor from the initial calibration analyzed August 16, 1992 on the RTX-1701 column were greater than 20%. The positive results for these analytes in soil sample 870/B/00SS01/1A required qualification as estimated values (J).

2.5 Blanks

In evaluating the contaminants in the laboratory method blanks, the data validator applied the appropriate action levels for common laboratory contaminants (as specified in the USEPA Region III Data Validation Guidelines) to the samples to which the blanks applied. In evaluating the contaminants in the field blanks and

the trip blanks, the data validator applied the appropriate action levels for field blanks and trip blanks to the samples of an associated media. Action levels for Pesticide/PCB method blanks were applied on an individual sample batch basis.

Please note that sample volumes, percent moisture and dilution factors have been taken into consideration when applying the appropriate blank action levels to the samples.

2.5.1 Volatiles

Acetone and Methylene Chloride were detected in all of the volatile method blanks associated with the soil and sediment samples at various concentrations which were greater than or equal to the Contract Required Quantitation Limits (CRQLs). Additionally, Methylene Chloride was detected in the rinsate and trip blanks associated with these samples. These compounds are considered common laboratory contaminants; the action levels determined for these compounds were ten times (10x) the highest concentration found in any of the associated blanks. For all of the soil and sediment samples, positive results less than the action level were qualified as not detected substantially above the level reported in the blank (B). Positive results above the action level and non-detected results did not require qualification.

Methylene Chloride was detected in the volatile method blanks associated with the surface water sample at various concentrations which were less than the CRQL. Additionally, Methylene Chloride was detected in the trip blanks associated with this sample. This compound is considered a common laboratory contaminant; the action level determined for this compound was ten times (10x) the highest concentration found in any of the associated blanks. For the surface water sample, positive results less than the action level were qualified as not detected substantially above the level reported in the blank (B).

2.5.2 Semi-volatiles

Phenol, Dimethylphthalate, Diethylphthalate, N-Nitroso-diphenylamine, Di-n-butylphthalate and bis(2-Ethylhexyl)phthalate were detected in the semi—volatile method preparation blanks associated with the analysis of the surface water and quality control samples at concentrations which were less than the CRQLs. The action levels determined for phthalate esters were ten times (10x) the highest concentration found in any of the associated blanks. The action levels for the remaining compounds were five times (5x) the highest concentration found in any of the associated blanks. For the surface water sample, positive results for Diethylphthalate and bis(2-Ethylhexyl)phthalate less than the respective action level were qualified as not detected substantially above the level reported in the blank (B).

Diethylphthalate, Di-n-butylphthalate, Benzo(a)anthracene and bis(2-Ethylhexyl)phthalate were detected in the semi-volatile method preparation blanks associated with the analysis of the soil and sediment samples at concentrations which were less than the CRQLs. Additionally, Diethylphthalate, bis(2-Ethylhexyl)phthalate and Chrysene were detected in the associated rinsate blank. The action levels determined for phthalate esters were ten times (10x) the highest concentration found in any of the associated blanks. The action levels for the remaining compounds were five times (5x) the highest concentration found in any of the associated blanks. For the soil and sediment samples, positive results for Diethylphthalate and bis(2-Ethylhexyl)phthalate less than the respective action level were qualified as not detected substantially above the level reported in the blank (B).

2.5.3 Pesticides/PCBs

Methoxychlor, alpha-Chlordane, alpha-BHC, Endosulfan sulfate, 4,4'-DDT and gamma-chlordane were detected in the various pesticide method preparation blanks associated with the analysis of the soil and sediment samples at concentrations which were less than the CRQLs. Action levels were determined for each blank. The action levels for each analyte was five times (5x) the concentration found in the blank and the action levels were used to qualify only those samples associated with a particular blank. Positive results for these analytes less than the respective action levels were qualified as not detected substantially above the level reported in the blank (B). Non-detected results and positive results above the action levels did not require qualification.

2.6 Surrogate Recoveries

The surrogate recoveries from the Volatile and Pesticide/PCB analyses of surface water, sediment and soil samples met the Contract Required Recovery range criteria specified in the CLP SOW.

The acid extractable surrogate recovery for 2,4,6-Tribromophenol from the Semi-volatile analysis of sample 870/B/00SS03/1A did not meet the Contract Required Recovery range criteria specified in the Statement of Work; the recovery was less than 10%. Re-analysis of this sample yielded a surrogate recovery which did not meet the recovery range criteria but which was greater than 10%. Both sets of data were reported. The non-detected acid extractable results from the original analysis were qualified as unusable (R).

The base/neutral extractable surrogate recovery for Terphenyl-d14 from the Semi-volatile analyses of sample 870/B/00SS06/1A did not meet the Contract Required Recovery range criteria specified in the CLP SOW; the recovery was slightly greater than 137%. The sample results did not require qualification.

2.7 Matrix Spike/Matrix Spike Duplicate

Samples 870/S/00SWP1/1A and 870/B/0SEDP1/1A were used for Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis for surface water and soil/sediment, respectively.

The Relative Percent Difference (RPD) for Benzene in the MS/MSD analysis of 870/S/00SWP1/1A did not meet the Contract Required RPD limit specified on the Form III for the analysis of the Volatile MS/MSD. The non-detected results for this analyte in the surface water sample did not require qualification.

The MS recoveries of 4-Chloro-3-methylphenol and 4-Nitrophenol for 870/S/00SWP1/1A were slightly greater than the Contract Required Recovery (CRR) ranges specified on the Form III for the analysis of the Semi-volatile MS/MSD. Non-detected results for these compounds in the unspiked aliquot of this sample did not require qualification.

The MS/MSD recoveries of 4-Chloro-3-methylphenol, Phenol, 2,4-Dinitrotoluene and 4-Nitrophenol for 870/B/0SEDP1/1A were slightly greater than the CRR ranges specified on the Form III for the analysis of the Semi-volatile MS/MSD. Non-detected results for these compounds in the unspiked aliquot of this sample did not require qualification.

2.8 Field Duplicates

One (1) field duplicate sample 870/B/0SEDP1/1A was collected and analyzed with the sediment and soil samples. Region III guidelines do not specify Relative Percent Difference (RPD) criteria. This quality control sample was not used to qualify data.

2.9 Internal Standard Performance

The Internal Standard Performance criteria for Volatile analysis were met for all of the samples and associated quality control samples.

The Internal Standard Performance criteria were not met for internal standards Chrysene-d12 and Perylene-d12 from the Semi-volatile analysis of the soil rinsate blank. Re-analysis of this sample yielded similar low internal standard area counts for Perylene-d12. The results from both analyses were reported; non-detected results for analytes quantitated using the internal standard Chrysene-d12 required qualification as estimated quantitation limits (UJ) for the original analysis. The positive and non-detected results for analytes quantitated using the internal standard Perylene-d12 required qualification as unusable (R) in both the original analysis and re-analysis of the rinsate blank.

2.10 Pesticide Instrument Performance

All Contract Required criteria from the CLP SOW and regional guidelines were met regarding the Resolution Check Mix, Retention Time Windows, DDT and Endrin Degradation and Tetrachloro-meta-xylene (TCMX) and Decachlorobiphenyl (DCB) Retention Time Checks.

2.11 Compound Identification

The CLP SOW and the Region III guidelines specify that certain criteria must be satisfied to positively identify a peak as a Target Compound List Volatile or Semi-volatile compound. These criteria are:

1) the target compound peak in the sample chromatogram must elute within ±0.06 Relative Retention Time (RRT) units of the RRT of that compound in the daily calibration standard; and
2) the mass spectrum of the compound in the sample must correlate with the mass spectrum of that compound in a current laboratory-generated standard such that:

    a) all ions present in the standard mass spectrum at a relative intensity greater than 10% must be present in the sample spectrum;
    b) the relative intensities of these ions must agree within ±20% between the standard and sample spectra; and
    c) ions greater than 10% in the sample spectrum but not present in the standard spectrum must be explained.

If all of the above criteria could not be satisfied, but in the technical judgement of the mass spectral interpretation specialist the identification of the compound is correct, the Laboratory is instructed to report the compound.

The identification of Volatile and Semi-volatile target compounds has been checked for all samples. Where there were questions concerning the identification of compounds, the data validator contacted the Laboratory. The compounds in question were checked by a Senior GC/MS analyst.

The CLP SOW specify that certain criteria must be satisfied to positively identify a peak as a Target Compound List Pesticide/PCB compounds. These criteria are:

1) positive presence of a TCL must be confirmed by analysis on a dissimilar chromatographic column;
2) the retention times of reported compounds must fall within the calculated retention time windows for both of the chromatographic columns;

3) the retention times and relative peak height ratios of major component peaks for the multi-response pesticides and PCBs in the sample must be compared to those in the calibration standard; and
4) confirmation by GC/MS must be performed if the concentration of an individual pesticide was present in the final sample extract in excess of 10 nanograms per microliter (ng/ul).

The identification of Pesticides and PCB target compounds has been checked for all samples. For the most part, TCL Pesticide and PCB compounds were not detected in the sediment and soil samples at concentrations greater than the CRQLs. Dieldrin and Heptachlor Epoxide were detected in sample 870/B/00SS04/1A at concentrations in excess of the respective CRQLs (150 ug/kg and 2.5 ug/kg, respectively); as required by number 4 above, the identification of Dieldrin in this sample was confirmed by GC/MS analysis. Identification criteria were met for this sample.

2.12 Compound Quantitation

The quantitation of Volatile and Semi-volatile target compounds has been checked for all samples. Where there were questions concerning the concentrations reported, the data validator contacted the Laboratory. The compounds in question were checked by a Senior GC/MS analyst.

3.0 INORGANIC DATA

The data were evaluated based upon the following parameters:

* data completeness
* holding times
* calibration verification
  blanks
  ICP interference check sample
  matrix spike recoveries
  laboratory and field duplicates
* laboratory control sample
  furnace atomic absorption results
* serial dilution results
* detection limit results
* sample results verification

* All criteria were met for these parameters.

If qualification of data was deemed necessary due to non-conformance with criteria specified for the above parameters, the qualifiers and reasons for qualification are explained in Sections 3.1 through 3.12.

3.1 Data Completeness

The Laboratory produced three reports containing data for these samples. The contents of these reports were found to be complete in accordance with the CLP SOW.

3.2 Holding Times

All samples were prepared and analyzed for Cyanide, Arsenic, Thallium, Selenium, Lead, Mercury and Inductively Coupled Plasma (ICP) metals within the required holding time.

3.3 Calibration Verification

All recovery criteria for the Initial and Continuing Calibration Verification standards were met for Cyanide, Arsenic, Thallium, Selenium, Lead, Mercury and ICP metals.

3.4 Blanks

In evaluating the contaminants in the laboratory preparation blanks (PB), the Initial Calibration Blanks (ICB), and the Continuing Calibration Blanks (CCB), the

data validator determined the appropriate action levels (as specified in the USEPA Region III Data Validation Guidelines) from the associated blank having the highest level of contamination and applied these action levels to all of the associated samples within the analytical sequence. A rinsate blank was collected with the soil samples by pouring field blank water through the sampling device and into the specified sample containers. When the same contaminant was present in the rinsate blank as in the preparation and/or analysis blanks, the highest level of contamination was used to determine the action level.

Please note that sample volumes, percent solids and dilution factors have been taken into consideration when applying the appropriate blank action levels to the samples.

Various contaminants were determined to be present in the blanks analyzed with the surface water sample for total metals. Aluminum, Calcium, Manganese, Sodium and Zinc were detected at various concentrations in the blanks. Action levels were determined for each analyte. Positive results in the surface water sample greater than the Instrument Detection Limit (IDL) but less than the action levels required qualification with a "B" flag indicating that the analyte was not detected substantially above the level reported in the associated blanks.

Various contaminants were determined to be present in the blanks analyzed with the surface water sample for dissolved metals. Aluminum, Calcium, Manganese, Sodium and Zinc were detected at various concentrations in the blanks. Action levels were determined for each analyte. Positive results in the surface water sample greater than the Instrument Detection Limit (IDL) but less than the action levels required qualification with a "B" flag indicating that the analyte was not detected substantially above the level reported in the associated blanks.

Various contaminants were determined to be present in the blanks analyzed with the soil and sediment samples. Aluminum, Barium, Calcium, Manganese, Sodium and Zinc were detected at various concentrations in the blanks. Action levels were determined for each analyte. Positive results in the soil and sediment samples greater than the Instrument Detection Limit (IDL) but less than the action levels required qualification with a "B" flag indicating that the analyte was not detected substantially above the level reported in the associated blanks.

3.5 ICP Interference Check Sample

All recovery criteria for the Interference Check Sample (ICS) AB standard were met.

The concentration of Calcium in the soil sample 870/B/00SS02/1A was comparable to the respective levels in the Interference Check Samples. The Calcium concentration at this level may have caused negative interferences with Silver and

Zinc. The undetected result for Silver in this soil sample required qualification as a biased low detection limit (UL). The positive result for Zinc in this soil sample required qualification as biased low (L). The Calcium concentration at this level may cause a positive interference with Barium, Cobalt and Manganese. Positive results for Barium and Manganese in this soil sample required qualification as biased high (K). Since the concentration of Cobalt in the sample could be entirely due to the interference, the results were qualified as unusable (R).

3.6 Matrix Spike Recoveries

Sample 870/B/00SS05/1A was used for Matrix Spike (MS) and Matrix Spike Duplicate (MSD) analysis for the sediment and soil samples. There were several analytes which did not meet the Contract Required Recovery (CRR) criteria as specified in the CLP SOW.

The MS/MSD recoveries of Antimony, Selenium and Silver were less than 75% but greater than 30%. The positive results for these analytes in the soil and sediment samples required qualification as biased low (L). The non-detected results for these analytes in the soil and sediment samples required qualification as biased low detection limits (UL).

The MS/MSD recoveries of Manganese were greater than 125% because the sample concentration is approximately ten times greater than the concentration of the spike. Per the validation guidelines, spike recovery limits do not apply when the sample concentration exceeds the spike concentration by a factor of four or more. The results for this analyte in the soil and sediment samples did not require qualification.

The surface water sample was analyzed in the same analytical batch of samples for total metals as the groundwater samples from this site. Groundwater sample 870/W/0ED08R/1A was used as the MS/MSD for this batch. The MS recovery of Thallium for the total metals batch was less than 75% but greater than 30%. The non-detected result for this analyte in the surface water sample required qualification as a biased low detection limit (UL).

The MS/MSD recoveries of Manganese and Antimony did not meet the 75% - 125% criteria for the total metals batch because the sample concentrations were greater than the spike concentrations by at least a factor of five. Per the validation guidelines, spike recovery limits do not apply when the sample concentration exceeds the spike concentration by a factor of four or more. The results for these analytes in the surface water samples did not require qualification.

The surface water sample was analyzed in the same analytical batch of samples for dissolved metals as the groundwater samples from this site. Groundwater sample 870/W/0ED08R/1A was used as the MS/MSD for this batch. The MS/MSD

recoveries of Selenium and Thallium for the dissolved metals batch was less than 75% but greater than 30%. The non-detected results for these analytes in the surface water sample required qualification as biased low detection limits (UL).

3.7 Duplicates

3.7.1 Laboratory Duplicates

Soil sample 870/B/00SS05/1A was used as the Laboratory Duplicate for the soil and sediment samples. Groundwater sample 870/W/0ED08R/1A was used as the Laboratory Duplicate for the surface water sample. In accordance with the QAPjP, the Relative Percent Difference (RPD) criteria used to assess the data were $\pm$20% for aqueous samples and $\pm$35% for soil and sediment samples.

The RPD criteria were met for all detected analytes in the Laboratory Duplicate for the soil and sediment samples.

The concentration of Total Iron in the aqueous Laboratory Duplicate was less than five times the Contract Required Detection Limits (5xCRDL). The absolute difference between the primary and duplicate sample was greater than the CRDL for Iron. The positive result for Total Iron in the surface water sample was qualified as estimated (J).

The RPD criteria were met for all detected dissolved analytes in the Laboratory Duplicate for the surface water sample.

3.7.2 Field Duplicates

The sediment sample was collected in duplicate yielding Field Duplicate sample 870/B/0SEDP1/FD. One of the groundwater samples was collected in duplicate yielding Field Duplicate sample 870/W/0ED02R/FD. The groundwater Field Duplicate was used to assess the surface water sample. In accordance with the QAPjP, the Relative Percent Difference (RPD) criteria used to assess the data were $\pm$30% for aqueous samples and $\pm$50% for soil and sediment samples.

The RPD criteria were met for all detected analytes in the Field Duplicate for the soil and sediment samples.

The concentration of Total Zinc in the aqueous Field Duplicate was less than five times the Contract Required Detection Limits (5xCRDL). The absolute difference between the primary and duplicate sample was greater than the two times the CRDL for Zinc. The positive result for Total Zinc in the surface water sample was qualified as estimated (J).

The concentration of Dissolved Zinc in the aqueous Field Duplicate was less than five times the Contract Required Detection Limits (5xCRDL). The absolute difference between the primary and duplicate sample was greater than the two times the CRDL for Zinc.

The RPD criteria for Dissolved Iron in the aqueous Field Duplicate was greater than 30%. The non-detected result for Dissolved Iron in the surface water sample did not require qualification.

3.8 Laboratory Control Sample

The aqueous Laboratory Control Sample (LCS) was prepared and analyzed for the target analytes in the aqueous batch of samples. The recovery of each analyte was within the USEPA control limits of ±20% for the aqueous LCS as specified in the CLP SOW.

The solid LCS sample was prepared and analyzed with the soil and sediment samples. The recovery of each analyte was within the control limits specified for the solid LCS by the supplier of the solid LCS. The CLP SOW does not specify control limits for the solid LCS.

3.9 Furnace Atomic Absorption Results

Total Selenium analysis by Graphite Furnace Atomic Absorption (GFAA) was performed for all soil and sediment samples. The post digestion spike recoveries for 870/B/0SEDP1/1A, 870/B/00SS01/1A, 870/B/00SS03/1A, 870/B/00SS04/1A, 870/B/00SS05/1A and 870/B/00SS06/1A were less than the 85%-115% criteria. The positive results for this analyte in these samples required qualification as biased low (L). The non-detected results for this analyte in these samples required qualification as biased low detection limits (UL).

Total Thallium analysis by Graphite Furnace Atomic Absorption (GFAA) was performed for all soil and sediment samples. The post digestion spike recovery for 870/B/00SS02/1A was less than the 85%-115% criteria. The non-detected result for this analyte in this sample required qualification as a biased low detection limit (UL).

Total Thallium analysis by Graphite Furnace Atomic Absorption (GFAA) was performed for the surface water sample. The post digestion spike recovery for 870/S/00SWP1/1A was less than the 85%-115% criteria. The non-detected result for this analyte in this sample required qualification as a biased low detection limit (UL).

Total Arsenic analysis by Graphite Furnace Atomic Absorption (GFAA) was performed for the surface water sample. The post digestion spike recovery for

870/S/00SWP1/1A exceeded the 85%-115% criteria. The non-detected result for this analyte in this sample did not require qualification.

Dissolved Thallium analysis by Graphite Furnace Atomic Absorption (GFAA) was performed for the surface water sample. The post digestion spike recovery for 870/S/00SWP1/1A was less than the 85%-115% criteria. The non-detected result for this analyte in this sample required qualification as a biased low detection limit (UL).

Dissolved Lead analysis by Graphite Furnace Atomic Absorption (GFAA) was performed for the surface water sample. The post digestion spike recovery for 870/S/00SWP1/1A was less than the 85%-115% criteria. The non-detected result for this analyte in this sample required qualification as a biased low detection limit (UL).

Soil sample 870/B/00SS02/1A required analysis for Lead using the Method of Standard Addition (MSA). The correlation coefficient was greater than or equal to 0.995 and the result was deemed acceptable.

3.10 Serial Dilution Results

All criteria were met for the Serial Dilution analyses performed for the aqueous analytical batches and the soil/sediment analytical batch.

3.11 Detection Limit Results

All criteria for Instrument Detection Limits and Reporting Requirements were met by the Laboratory for Cyanide, Arsenic, Thallium, Selenium, Lead, Mercury, and ICP metals.

3.12 Sample Results

All sample results were within the linear range for ICP analysis and within the calibration range for Cyanide analysis, Graphite Furnace Atomic Absorption analysis and Mercury analysis.

Sample 870/B/00SS02/1A required analysis at a 1:5 dilution for Selenium due to matrix interference.

Samples 870/B/0SEDP1/1A, 870/B/0SEDP1/FD, 870/B/00SS05/1A and 870/B/00SS06/1A required analysis at a 1:10 dilution for Lead due to matrix interference.

Sample 870/B/00SS01/1A required analysis at a 1:20 dilution for Lead due to matrix interference.

4.0 SUMMARY

Validation of the Organic and Inorganic data collected for the Phase 1A RI/FS from the Elizabethtown Landfill was performed in accordance with Federal and Regional data validation guidelines, where available. Section 2.0 discusses the conformance of Organic data to the criteria specified in the CLP SOW OLM01.8 dated 3/90 (revised 8/91) and the data validation guidelines. Section 3.0 discusses the conformance of Inorganic data to the criteria specified in the CLP SOW ILM02.1 dated 3/90 (revised 9/91) and the data validation guidelines.

Overall, the data required qualification due to some quality control criteria which were not achieved, but the majority of the data may be deemed usable for the RI/FS. Although a positive result was qualified as estimated, biased high or biased low, the analyte should be considered present. Similarly, a non-detected result which was qualified as an estimated or biased low quantitation/detection limit should be considered not present for the purposes of the RI/FS, although the limit itself may not be precise.

TABLE 1

Sample Point Identifications

SURFACE WATER SAMPLES

Sample ID	Analyses
870/S/00SWP1/1A	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide, Dissolved Metals

SEDIMENT SAMPLES

Sample ID	Analyses
870/B/0SEDP1/1A	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide
870/B/0SEDP1/FD	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide

SOIL SAMPLES

Sample ID	Analyses
870/B/00SS01/1A	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide
870/B/00SS02/1A	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide
870/B/00SS03/1A	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide
870/B/00SS03/RE	Semi-volatile Organics
870/B/00SS04/1A	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide
870/B/00SS04/DL	Pesticides/PCBs
870/B/00SS05/1A	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide
870/B/00SS06/1A	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide

TABLE 1

Sample Point Identifications

QUALITY CONTROL SAMPLES

Sample ID	Analyses
870/S/00SWP1/MS	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs
870/S/00SWP1/SD	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs
870/S/00TB01/1A	Volatile Organics
870/B/0SEDP1/MS	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs
870/B/0SEDP1/SD	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs
870/B/00SS05/MS	Total Metals, Cyanide
870/B/00SS05/SD	Total Metals, Cyanide
870/B/0001RB/1A	Volatile Organics, Semi-volatile Organics, Pesticides/PCBs, Total Metals, Cyanide
870/B/00TB01/1A	Volatile Organics
870/B/00TB02/1A	Volatile Organics

TABLE 2

Data Qualifiers

A	-	The data is acceptable; identification is confirmed.
U	-	The analyte was tested for but was not detected. The associated numerical value is either the sample quantitation limit or the sample detection limit.
B	-	The analyte was also detected in one or more of the associated quality control blanks (laboratory, field and/or trip blanks). The compound was not detected substantially above the level reported in the associated blanks.
R	-	Reject data due to quality control criteria. The data are unusable (analyte may or may not be present in the sample). Resampling and/or re-analysis is necessary for verification.
N	-	Tentative identification; consider analyte present. Special methods may be necessary to confirm its presence or absence in future sampling events.
J	-	The analyte is present. The associated numerical value is an estimated quantity and may not be accurate or precise.
K	-	The analyte is present. The associated numerical value may be biased high. The actual value is expected to be lower.
L	-	The analyte is present The associated numerical value may be biased low. The actual value is expected to be higher.
UJ	-	The analyte was tested for but was not detected. The sample quantitation limit or the sample detection limit is estimated and may be inaccurate or imprecise.
UL	-	The analyte was tested for but was not detected. The sample quantitation limit or the sample detection limit is estimated but is probably higher.
Q	-	There is no analytical result for this analyte.

APPENDIX G

WET CHEMISTRY (CONVENTIONAL) DATA EVALUATION FORMS

Groundwater and Surface Water

Data Evaluation Checklist

Project Name: Elizabethtown RI/FS **Project Number:** 923-6053

Reviewer: Stepan Nevshehirlian **Date:** 09/09/92

Signature: Stepan Nashehirlian

Inorganic Conventional Parameters

Parameter: Total Alkalinity **Method:** 310.1

Matrix: Surface/Groundwater

Sample Points: SSWP1-1A, WED02R, WED02RDU, WED05R, WED08R, 01FB, WED12I, WED10I, WED09R, EU14DO

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?		X(1)	
(b) Was the CoC signed by both field and laboratory personnel?	X		
(c) Were samples received in good condition?	X		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	X		
(b) Were the correct preservatives used?	X		
(c) Was the correct method used?	X		
(d) Were appropriate reporting limits achieved?	X		
(e) Were any sample dilutions noted?		X	
(f) Were any matrix problems noted?		X	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?	X		
(b) Were MS/MSD precision criteria met?	X		
(c) Were Lab Duplicate precision criteria met?	X		

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(b) Was MSD accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(c) Was LCS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
5. Blanks			
(a) Was analyte detected in the method blank(s)?		X	
(b) Was analyte detected in the field blank(s)?	X(2)		

6. Comments/Notes

(1) Chain of Custody did not agree with ID listed on some sample jars. Some of the sample points had the suffix "-1A" on COC but not on sample jars.

(2) Total Alkalinity was detected in field blank (01FB-1A) at a concentration of 2 mg/l.

Data Evaluation Checklist

Project Name: Elizabethtown RI/FS **Project Number:** 923-6053

Reviewer: Stepan Nevshehirlian **Date:** 09/15/92

Signature: Stepan Nevshehirlian

Inorganic Conventional Parameters

Parameter: Biochemical Oxygen Demand **Method:** 405.1

Matrix: Surface/Groundwater

Sample Points: SSWP1-1A, WED02R-1A, WED02RDUP, WED05R-1A, WED08R-1A, X01FB-1A, WED12I-1A, WED10I-1A, WED09R-1A, WEU14DT1A

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?		X(1)	
(b) Was the CoC signed by both field and laboratory personnel?	X		
(c) Were samples received in good condition?	X		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?		X(2)	
(b) Were the correct preservatives used?	X		
(c) Was the correct method used?	X		
(d) Were appropriate reporting limits achieved?		X(3)	
(e) Were any sample dilutions noted?		X	
(f) Were any matrix problems noted?		X	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?		X(4)	
(b) Were MS/MSD precision criteria met?	X		
(c) Were Lab Duplicate precision criteria met?			X

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?		X(5)	
Recovery could not be calculated since sample contained high concentration of analyte?			X
(b) Was MSD accuracy criteria met?		X(5)	
Recovery could not be calculated since sample contained high concentration of analyte?			X
(c) Was LCS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
5. Blanks			
(a) Was analyte detected in the method blank(s)?		X	
(b) Was analyte detected in the field blank(s)?		X	

6. Comments/Notes

(1) COC for sample SSWP1-1A does not have date and time relinquished by sampler. Lab put incorrect COC into report, this COC was for TCL/TAL analytes instead of TKN and BOD. Date and time NAC received samples from CompuChem is not indicated on COCs for WED02R, WED02RDUP, WED05R, WED08R, WED10I, WED12I, WED14D and X01FB.

(2) 48 hour hold time was exceeded for the following samples: WED08R-1A, X01FB-1A, WED05R-1A, WED02R-1A, WED02RDUP, WEU14DT1A, WED10I-1A. Samples received at subcontractor after holdtime expired.

(3) Table 17 of the QA Project Plan indicates a method detection limit of 3 mg/l. The laboratory reports a detection limit of 4 mg/l. The difference is attributed to a different subcontract laboratory being used.

(4) Table 12 of the QA Project Plan indicates field precision to be +/-'30%. Field precision for sample WED02R (WED02RDU) is +48%.

(5) Recoveries for MS and MSD are 133% and 133%, respectively

Data Evaluation Checklist

Project Name: Elizabethtown RI/FS **Project Number:** 923-6053

Reviewer: Stepan Nevshehirlian **Date:** 09/09/92

Signature: Stepan Nevshehirlian

Inorganic Conventional Parameters

Parameter: Chromium VI **Method:** 7196

Matrix: Surface/Groundwater

Sample Points: SSWP1-1A, WED02R, WED02RDU, WED05R, WED08R, 01FB, WED12I, WED10I, WED09R, EU14DO

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?		X(1)	
(b) Was the CoC signed by both field and laboratory personnel?	X		
(c) Were samples received in good condition?	X		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?		X(2)	
(b) Were the correct preservatives used?	X		
(c) Was the correct method used?	X		
(d) Were appropriate reporting limits achieved?	X		
(e) Were any sample dilutions noted?		X	
(f) Were any matrix problems noted?		X	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?			X(3)
(b) Were MS/MSD precision criteria met?	X		
(c) Were Lab Duplicate precision criteria met?	X		

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(b) Was MSD accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(c) Was LCS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
5. Blanks			
(a) Was analyte detected in the method blank(s)?		X	
(b) Was analyte detected in the field blank(s)?		X	

6. Comments/Notes

(1) Chain of Custody did not agree with ID listed on some sample jars. Some of the sample points had the suffix "-1A" on COC but not on sample jars.

(2) WED09R and EU14DO analysis for Chromium (VI) exceeded hold time.

(3) WED02R concentration for Chromium (VI) =0.21 mg/l. Field duplicate WED02RDUP concentration was not detected (R.L.=0.02 mg/l). Therefore, RPD was not calculated.

Data Evaluation Checklist

Project Name: Elizabethtown RI/FS **Project Number:** 923-6053

Reviewer: Stepan Nevshehirlian **Date:** 09/09/92

Signature: Stepan Nevshehirlian

Inorganic Conventional Parameters

Parameter: Chloride **Method:** 325.3

Matrix: Surface/Groundwater

Sample Points: SSWP1-1A, WED02R, WED02RDU, WED05R, WED08R, 01FB, WED12I, WED10I, WED09R, EU14D

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?		X(1)	
(b) Was the CoC signed by both field and laboratory personnel?	X		
(c) Were samples received in good condition?	X		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	X		
(b) Were the correct preservatives used?	X		
(c) Was the correct method used?	X		
(d) Were appropriate reporting limits achieved?	X		
(e) Were any sample dilutions noted?	X(2)		
(f) Were any matrix problems noted?		X	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?	X		
(b) Were MS/MSD precision criteria met?	X		
(c) Were Lab Duplicate precision criteria met?	X		

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(b) Was MSD accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(c) Was LCS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
5. Blanks			
(a) Was analyte detected in the method blank(s)?		X	
(b) Was analyte detected in the field blank(s)?		X	

6. Comments/Notes

(1) Chain of Custody did not agree with ID listed on some sample jars. Some of the sample points had the suffix "-1A" on COC but not on sample jars.

(2) The following dilution factors were noted in the laboratory data: WED10I 1:10, WED02R 1:50, WED02RDUP 1:25, and WED05R 1:5.

NOTE: For WED08R a transcription error occurred between the raw data presented on page 88 and the result reported on the Form 1. The correct sample concentration is 69 mg/l instead on 67 mg/l.

Data Evaluation Checklist

Project Name: Elizabethtown RI/FS Project Number: 923-6053

Reviewer: Stepan Nevshehirlian Date: 09/09/92

Signature: Stepan Nevshehirlian

Inorganic Conventional Parameters

Parameter: Chemical Oxygen Demand Method: 410.4

Matrix: Surface/Groundwater

Sample Points: SSWP1-1A, WED02R, WED02RDU, WED05R, WED08R, 01FB, WED12I, WED10I, WED09R, EU14DO

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?		X(1)	
(b) Was the CoC signed by both field and laboratory personnel?	X		
(c) Were samples received in good condition?	X		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	X		
(b) Were the correct preservatives used?		X(2)	
(c) Was the correct method used?	X(3)		
(d) Were appropriate reporting limits achieved?	X		
(e) Were any sample dilutions noted?		X	
(f) Were any matrix problems noted?		X	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?		X(4)	
(b) Were MS/MSD precision criteria met?	X		
(c) Were Lab Duplicate precision criteria met?	X		

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(b) Was MSD accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(c) Was LCS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
5. Blanks			
(a) Was analyte detected in the method blank(s)?		X	
(b) Was analyte detected in the field blank(s)?		X	

6. Comments/Notes

(1) Chain of Custody did not agree with ID listed on some sample jars. Some of the sample points had the suffix "-1A" on COC but not on sample jars.

(2) A discrepancy exists on the COC for sample SSWP1-1A. The actual COC states that the sample was not preserved. However, the parameter list attached to the COC indicates that the appropriate preservative was used.

(3) The laboratory used method 410.4. Table 10 of the QA Project Plan indicates the use of method 410.2.

(4) Table 12 of the QA Project plan indicates field precision to be +/- 30%. Field precision for WED02R (WED02RDU) is 51.7%.

Data Evaluation Checklist

Project Name: Elizabethtown RI/FS Project Number: 923-6053

Reviewer: Stepan Nevshehirlian Date: 09/09/92

Signature: Stepan Nashehirlian

Inorganic Conventional Parameters

Parameter: Fluoride Method: 340.2

Matrix: Surface/Groundwater

Sample Points: SSWP1-1A, WED02R, WED02RDU, WED05R, WED08R, 01FB, WED12I, WED10I, WED09R, EU14D

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?		X(1)	
(b) Was the CoC signed by both field and laboratory personnel?	X		
(c) Were samples received in good condition?	X		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	X		
(b) Were the correct preservatives used?	X		
(c) Was the correct method used?	X		
(d) Were appropriate reporting limits achieved?	X		
(e) Were any sample dilutions noted?		X	
(f) Were any matrix problems noted?		X	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?	X		
(b) Were MS/MSD precision criteria met?	X		
(c) Were Lab Duplicate precision criteria met?			X(2)

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(b) Was MSD accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(c) Was LCS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
5. Blanks			
(a) Was analyte detected in the method blank(s)?		X	
(b) Was analyte detected in the field blank(s)?		X	

6. Comments/Notes

(1) Chain of Custody did not agree with ID listed on some sample jars. Some of the sample points had the suffix "-1A" on COC but not on sample jars.

(2) Fluoride was not detected in either the primary or the laboratory duplicate sample. Therefore, the RPD could not be calculated.

Data Evaluation Checklist

Project Name: Elizabethtown RI/FS Project Number: 923-6053

Reviewer: Stepan Nevshehirlian Date: 09/09/92

Signature: Stepan Nevshehirlian

Inorganic Conventional Parameters

Parameter: Hardness Method: 130.2

Matrix: Surface/Groundwater

Sample Points: SSWP1-1A, WED02R, WED02RDU, WED05R, WED08R, 01FB, WED12I, WED10I, WED09R, EU14DO

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?		X(1)	
(b) Was the CoC signed by both field and laboratory personnel?	X		
(c) Were samples received in good condition?	X		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	X		
(b) Were the correct preservatives used?		X(2)	
(c) Was the correct method used?	X		
(d) Were appropriate reporting limits achieved?	X		
(e) Were any sample dilutions noted?	X(3)		
(f) Were any matrix problems noted?		X	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?	X		
(b) Were MS/MSD precision criteria met?	X		
(c) Were Lab Duplicate precision criteria met?	X		

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(b) Was MSD accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(c) Was LCS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
5. Blanks			
(a) Was analyte detected in the method blank(s)?		X	
(b) Was analyte detected in the field blank(s)?		X	

6. Comments/Notes

(1) Chain of Custody did not agree with ID listed on some sample jars. Some of the sample points had the suffix "-1A" on COC but not on sample jars.

(2) A discrepancy exists on the COC for sample SSWP1-1A. The actual COC states that the sample was not preserved. However, the parameter list attached to the COC indicates that the appropriate preservative was used.

(3) The following dilution factors were noted in the laboratory data: WED02R 1:5 WED02RDU 1:5, WED10I 1:5.

Data Evaluation Checklist

Project Name: Elizabethtown RI/FS **Project Number:** 923-6053

Reviewer: Stepan Nevshehirlian **Date:** 09/09/92

Signature: Stepan Nevshehirlian

Inorganic Conventional Parameters

Parameter: Ammonia **Method:** 350.3

Matrix: Surface/Groundwater

Sample Points: SSWP1-1A, WED02R, WED02RDU, WED05R, WED08R, 01FB, WED12I, WED10I, WED09R, EU14DO

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?		X(1)	
(b) Was the CoC signed by both field and laboratory personnel?	X		
(c) Were samples received in good condition?	X		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	X		
(b) Were the correct preservatives used?		X(2)	
(c) Was the correct method used?	X		
(d) Were appropriate reporting limits achieved?	X		
(e) Were any sample dilutions noted?	X(3)		
(f) Were any matrix problems noted?		X	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?	X		
(b) Were MS/MSD precision criteria met?	X		
(c) Were Lab Duplicate precision criteria met?			X(4)

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(b) Was MSD accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(c) Was LCS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
5. Blanks			
(a) Was analyte detected in the method blank(s)?		X	
(b) Was analyte detected in the field blank(s)?		X	

6. Comments/Notes

(1) Chain of Custody did not agree with ID listed on some sample jars. Some of the sample points had the suffix "-1A" on COC but not on sample jars.

(2) Table 10 of the QA Project Plan indicates the use of H2SO4 for preservation. Neither the COC nor the parameters list attached to the COC for sample SSWP1-1A indicate the use of H2SO4. Also, some of the parameter lists for other sample points do not indicate the use of H2SO4. The lab has grouped these parameter lists together and it is uncertain which samples correspond to which forms.

(3) The following dilutions were noted in the laboratory data: ED05R 1:2.

(4) Both results were undetected for Ammonia and the RPD was not calculated.

Data Evaluation Checklist

Project Name: Elizabethtown RI/FS Project Number: 923-6053

Reviewer: Stepan Nevshehirlian Date: 09/09/92

Signature: Stepan Nevshehirlian

Inorganic Conventional Parameters

Parameter: Nitrate/Nitrite Method: 353.1

Matrix: Surface/Groundwater

Sample Points: SSWP1-1A, WED02R, WED02RDU, WED05R, WED08R, 01FB, WED12I, WED10I, WED09R, EU14DO

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?		X(1)	
(b) Was the CoC signed by both field and laboratory personnel?	X		
(c) Were samples received in good condition?	X		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	X		
(b) Were the correct preservatives used?		X(2)	
(c) Was the correct method used?	X		
(d) Were appropriate reporting limits achieved?	X		
(e) Were any sample dilutions noted?	X(3)		
(f) Were any matrix problems noted?		X	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?			X(4)
(b) Were MS/MSD precision criteria met?	X		
(c) Were Lab Duplicate precision criteria met?		X(5)	

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(b) Was MSD accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(c) Was LCS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
5. Blanks			
(a) Was analyte detected in the method blank(s)?		X	
(b) Was analyte detected in the field blank(s)?	X(6)		

6. Comments/Notes

(1) Chain of Custody did not agree with ID listed on some sample jars. Some of the sample points had the suffix "-1A" on COC but not on sample jars.

(2) A discrepancy exists on the COC for sample SSWP1-1A. The actual COC states that no preservatives were used. However, the parameters list attached to the COC indicates that the appropriate preservative was used.

(3) The following dilutions were noted in the laboratory data: SSWP1-1A 1:100.

(4) The concentration in sample WED02R was undetected (R.L.=0.04 mg/l). The concentration in duplicate sample (WED02RDU) was 0.094 mg/l. Using the R.L. as the concentration for sample WED02R yields a field precision of 70% which exceeds the +/- 30% indicated in table 12 of the QA Project Plan.

(5) Precision for laboratory duplicate of SSWP1-1A (analyzed 8/14/92) was acceptable. The laboratory duplicate performed on WED09R-1A on 8/24/92 exceeded the precision criteria of 20%; precision is 20.6%.

(6) A concentration of 0.15 mg/l was detected in the field blank (01FB-1A).

Data Evaluation Checklist

Project Name: Elizabethtown RI/FS Project Number: 923-6053

Reviewer: Stepan Nevshehirlian Date: 09/09/92

Signature: Stepan Nevshehirlian

Inorganic Conventional Parameters

Parameter: Total Phosphorous Method: 365.3

Matrix: Surface/Groundwater

Sample Points: SSWP1-1A, WED02R, WED02RDU, WED05R, WED08R, 01FB, WED12I, WED10I, WED09R, EU14DO

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?		X(1)	
(b) Was the CoC signed by both field and laboratory personnel?	X		
(c) Were samples received in good condition?	X		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	X		
(b) Were the correct preservatives used?		X(2)	
(c) Was the correct method used?	X		
(d) Were appropriate reporting limits achieved?	X		
(e) Were any sample dilutions noted?		X	
(f) Were any matrix problems noted?		X	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?	X		
(b) Were MS/MSD precision criteria met?	X		
(c) Were Lab Duplicate precision criteria met?	X		

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(b) Was MSD accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(c) Was LCS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
5. Blanks			
(a) Was analyte detected in the method blank(s)?		X	
(b) Was analyte detected in the field blank(s)?		X	

6. Comments/Notes

(1) Chain of Custody did not agree with ID listed on some sample jars. Some of the sample points had the suffix "-1A" on COC but not on sample jars.

(2) Table 10 of the QA Project Plan indicates the use of H2SO4 for preservation. Neither the COC nor the attached parameters list for sample SSWP1-1A indicate the use of any preservatives. Similarly, some of the attached parameter lists for other samples do not indicate the use of H2SO4. The lab has grouped these sheets together and it is uncertain which samples correspond with which forms.

Data Evaluation Checklist

Project Name: Elizabethtown RI/FS **Project Number:** 923-6053

Reviewer: Stepan Nevshehirlian **Date:** 09/09/92

Signature: Stepan Nevshehirlian

Inorganic Conventional Parameters

Parameter: Sulfate **Method:** 375.4

Matrix: Surface/Groundwater

Sample Points: SSWP1-1A, WED02R, WED02RDU, WED05R, WED08R, 01FB, WED12I, WED10I, WED09R, EU14D

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?		X(1)	
(b) Was the CoC signed by both field and laboratory personnel?	X		
(c) Were samples received in good condition?	X		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	X		
(b) Were the correct preservatives used?	X		
(c) Was the correct method used?	X		
(d) Were appropriate reporting limits achieved?	X		
(e) Were any sample dilutions noted?	X(2)		
(f) Were any matrix problems noted?		X	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?		X(3)	
(b) Were MS/MSD precision criteria met?	X		
(c) Were Lab Duplicate precision criteria met?	X		

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(b) Was MSD accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(c) Was LCS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
5. Blanks			
(a) Was analyte detected in the method blank(s)?		X	
(b) Was analyte detected in the field blank(s)?		X	

6. Comments/Notes

(1) Chain of Custody did not agree with ID listed on some sample jars. Some of the sample points had the suffix "-1A" on COC but not on sample jars.

(2) The following dilution factors were noted in the laboratory data: WED02R 1:4, WED02RDU 1:10, ED05R 1:2, WED12I 1:2.

(3) Table 12 of the QA Project Plan indicates field precision to be +/- 30%. Field duplicate precision for WED02R (WED02RDU) is 31.6%.

Data Evaluation Checklist

Project Name: Elizabethtown RI/FS Project Number: 923-6053

Reviewer: Stepan Nevshehirlian Date: 09/09/92

Signature: Stepan Nashehirlian

Inorganic Conventional Parameters

Parameter: Sulfide Method: 376.1

Matrix: Surface/Groundwater

Sample Points: SSWP1-1A, WED02R, WED02RDU, WED05R, WED08R, 01FB, WED12I, WED10I, WED09R, EU14DO

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?		X(1)	
(b) Was the CoC signed by both field and laboratory personnel?	X		
(c) Were samples received in good condition?	X		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	X		
(b) Were the correct preservatives used?		X(2)	
(c) Was the correct method used?		X(3)	
(d) Were appropriate reporting limits achieved?	X		
(e) Were any sample dilutions noted?		X	
(f) Were any matrix problems noted?		X	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?		X(4)	
(b) Were MS/MSD precision criteria met?	X		
(c) Were Lab Duplicate precision criteria met?	X		

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(b) Was MSD accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(c) Was LCS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
5. Blanks			
(a) Was analyte detected in the method blank(s)?		X	
(b) Was analyte detected in the field blank(s)?		X	

6. Comments/Notes

(1) Chain of Custody did not agree with ID listed on some sample jars. Some of the sample points had the suffix "-1A" on COC but not on sample jars.

(2) A discrepance exists on the COC. The actual COC for sample SSWP1-1A states that no preservatives were used. However, the attached parameter list to the COC states that the preservative indicated in Table 10 of the QA Project Plan (ZnAc, NaOH) was used.

(3) Table 10 in the QA Project Plan indicates the use of method SW846 9030. However, the lab reported using method 376.1 and two of the laboratory data sheets indicate the use of method 325.3.

(4) Table 12 of the QA Project Plan indicates field precision to be +/- 30%. Field precision for sample WED02R (WED02RDU) is 50%.

Data Evaluation Checklist

Project Name: Elizabethtown RI/FS Project Number: 923-6053

Reviewer: Stepan Nevshehirlian Date: 09/09/92

Signature: Stepan Nevshehirlian

Inorganic Conventional Parameters

Parameter: Total Dissolved Solids Method: 160.1

Matrix: Surface/Groundwater

Sample Points: SSWP1-1A, WED02R, WED02RDU, WED05R, WED08R, 01FB, WED12I, WED10I, WED09R, EU14D

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?		X(1)	
(b) Was the CoC signed by both field and laboratory personnel?	X		
(c) Were samples received in good condition?	X		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	X		
(b) Were the correct preservatives used?	X		
(c) Was the correct method used?	X		
(d) Were appropriate reporting limits achieved?	X		
(e) Were any sample dilutions noted?		X	
(f) Were any matrix problems noted?		X	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?	X		
(b) Were MS/MSD precision criteria met?	X		
(c) Were Lab Duplicate precision criteria met?	X		

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(b) Was MSD accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(c) Was LCS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
5. Blanks			
(a) Was analyte detected in the method blank(s)?		X	
(b) Was analyte detected in the field blank(s)?	X(2)		

6. Comments/Notes

(1) Chain of Custody did not agree with ID listed on some sample jars. Some of the sample points had the suffix "-1A" on COC but not on sample jars.

(2) TDS detected at 73 mg/l in field blank 01FB-1A.

NOTE: A transcription error occurred on the raw data for WED02RDUP. Correct results is 1527 mg/l instead of 1890 mg/l.

Data Evaluation Checklist

Project Name: Elizabethtown RI/FS Project Number: 923-6053

Reviewer: Stepan Nevshehirlian Date: 09/15/92

Signature: Stepan Nevshehirlian

Inorganic Conventional Parameters

Parameter: Total Kjeldahl Nitrogen Method: 351.3

Matrix: Surface/Groundwater

Sample Points: SSWP1-1A, WED02R-1A, WED02RDUP, WED05R-1A, WED08R-1A, X01FB-1A, WED12I-1A, WED10I-1A, WED09R-1A, WEU14DT1A

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?		X(1)	
(b) Was the CoC signed by both field and laboratory personnel?	X		
(c) Were samples received in good condition?	X		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	X		
(b) Were the correct preservatives used?	X(2)		
(c) Was the correct method used?	X		
(d) Were appropriate reporting limits achieved?	X		
(e) Were any sample dilutions noted?		X	
(f) Were any matrix problems noted?		X	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?	X		
(b) Were MS/MSD precision criteria met?	X		
(c) Were Lab Duplicate precision criteria met?			X

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(b) Was MSD accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(c) Was LCS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
5. Blanks			
(a) Was analyte detected in the method blank(s)?		X	
(b) Was analyte detected in the field blank(s)?		X	

6. Comments/Notes

(1) COC for sample SSWP1-1A does not have date and time relinquished by sampler. Lab put incorrect COC into report, this COC was for TCL/TAL analytes instead of TKN and BOD. Date and time NAC received samples from CompuChem is not indicated on COCs for WED02R, WED02RDUP, WED05R, WED08R, WED10I, WED12I, WED14D and X01FB.

(2) Table 10 of the QAPjP indicates the use of H_2SO_4 as a preservative. The COC for sample SSWP1-1A does not indicate the use of H_2SO_4. However, the laboratory indicated that the sample was received at a pH <2. The NAC preservative checklists do not indicate that the pH was checked for samples WED05R, WED02R, WED02RDUP, WED12I, WED09R and WEU14D. COC for WEU14D does not indicate the use of H_2SO_4 as a preservative.

Data Evaluation Checklist

Project Name: Elizabethtown RI/FS **Project Number:** 923-6053

Reviewer: Stepan Nevshehirlian **Date:** 09/09/92

Signature: Stepan Nevshehirlian

Inorganic Conventional Parameters

Parameter: Total Organic Carbon **Method:** 415.1

Matrix: Surface/Groundwater

Sample Points: SSWP1-1A, WED02R, WED02RDU, WED05R, WED08R, 01FB, WED12I, WED10I, WED09R, EU14DO

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?		X(1)	
(b) Was the CoC signed by both field and laboratory personnel?	X		
(c) Were samples received in good condition?	X		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	X		
(b) Were the correct preservatives used?		X(2)	
(c) Was the correct method used?	X		
(d) Were appropriate reporting limits achieved?	X		
(e) Were any sample dilutions noted?		X	
(f) Were any matrix problems noted?		X	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?	X		
(b) Were MS/MSD precision criteria met?	X		
(c) Were Lab Duplicate precision criteria met?	X		

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(b) Was MSD accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(c) Was LCS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
5. Blanks			
(a) Was analyte detected in the method blank(s)?		X	
(b) Was analyte detected in the field blank(s)?		X	

6. Comments/Notes

(1) Chain of Custody did not agree with ID listed on some sample jars. Some of the sample points had the suffix "-1A" on COC but not on sample jars.

(2) A discrepancy exists on the COC. The actual COC states that sample SSWP1-1A was not preserved. However, the parameters list attached to the COC indicates that the appropriate preservative was used.

Data Evaluation Checklist

Project Name: Elizabethtown RI/FS Project Number: 923-6053

Reviewer: Stepan Nevshehirlian Date: 09/09/92

Signature: Stepan Nevshehirlian

Inorganic Conventional Parameters

Parameter: Total Suspended Solids Method: 160.2

Matrix: Surface/Groundwater

Sample Points: SSWP1-1A, WED02R, WED02RDU, WED05R, WED08R, 01FB, WED12I, WED10I; EU14D

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?		X(1)	
(b) Was the CoC signed by both field and laboratory personnel?	X		
(c) Were samples received in good condition?	X		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	X		
(b) Were the correct preservatives used?	X		
(c) Was the correct method used?	X		
(d) Were appropriate reporting limits achieved?	X		
(e) Were any sample dilutions noted?		X	
(f) Were any matrix problems noted?		X	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?	X		
(b) Were MS/MSD precision criteria met?	X		
(c) Were Lab Duplicate precision criteria met?	X		

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?			X(2)
Recovery could not be calculated since sample contained high concentration of analyte?			X
(b) Was MSD accuracy criteria met?			X(2)
Recovery could not be calculated since sample contained high concentration of analyte?			X
(c) Was LCS accuracy criteria met?			X(2)
Recovery could not be calculated since sample contained high concentration of analyte?			X
5. Blanks			
(a) Was analyte detected in the method blank(s)?		X	
(b) Was analyte detected in the field blank(s)?		X	

6. Comments/Notes

(1) Chain of Custody did not agree with ID listed on some sample jars. Some of the sample points had the suffix "-1A" on COC but not on sample jars.

(2) MS, MSD, LCS, samples not analyzed for TSS.

(3) TSS not analyzed or reported for WED09R.

Sediment

Data Evaluation Checklist

Project Name: Elizabethtown RI/FS Project Number: 923-6053

Reviewer: Stepan Nevshehirlian Date: 09/15/92

Signature: Stepan Nashehirlian

Inorganic Conventional Parameters

Parameter: Total Organic Carbon Method: 505

Matrix: Rinsate Blank

Sample Points: B01RB1A

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?	X		
(b) Was the CoC signed by both field and laboratory personnel?	X		
(c) Were samples received in good condition?	X		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	X		
(b) Were the correct preservatives used?	X		
(c) Was the correct method used?		X(1)	
(d) Were appropriate reporting limits achieved?	X		
(e) Were any sample dilutions noted?		X	
(f) Were any matrix problems noted?		X	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?			X
(b) Were MS/MSD precision criteria met?	X		
(c) Were Lab Duplicate precision criteria met?			X

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(b) Was MSD accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(c) Was LCS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
5. Blanks			
(a) Was analyte detected in the method blank(s)?		X	
(b) Was analyte detected in the field blank(s)?			X

6. Comments/Notes

(1) Table 10 of the QA Project Plan indicates the use of EPA Method 415.1. The laboratory reports using Method 505 of "Standard Methods for the Examination of Water and Wastewater."

Data Evaluation Checklist

Project Name: Elizabethtown RI/FS Project Number: 923-6053

Reviewer: Stepan Nevshehirlian Date: 09/11/92

Signature: Stepan Nevshehirlian

Inorganic Conventional Parameters

Parameter: Total Organic Carbon Method: 505

Matrix: SEDIMENT

Sample Points: SEDP1-1A, SEDP1DUP

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?	X		
(b) Was the CoC signed by both field and laboratory personnel?	X		
(c) Were samples received in good condition?	X		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	X		
(b) Were the correct preservatives used?	X(1)		
(c) Was the correct method used?		X(2)	
(d) Were appropriate reporting limits achieved?		X(3)	
(e) Were any sample dilutions noted?		X	
(f) Were any matrix problems noted?		X	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?		X(4)	
(b) Were MS/MSD precision criteria met?	X		
(c) Were Lab Duplicate precision criteria met?			X

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(b) Was MSD accuracy criteria met?	X		
Recovery could not be calculated since sample contained high concentration of analyte?			X
(c) Was LCS accuracy criteria met?			X
Recovery could not be calculated since sample contained high concentration of analyte?			X
5. Blanks			
(a) Was analyte detected in the method blank(s)?		X	
(b) Was analyte detected in the field blank(s)?			X

6. Comments/Notes

(1) The Chain of Custody did not note whether the samples were cooled (4 deg. C) as indicated in Table 11 of the QA Project Plan.

(2) Table 11 of the QA Project Plan indicates the use of modified EPA method 415.1. The lab reported using Method 505 of "Standard Methods for the Examination of Water and Wastewater".

(3) Table 17 of the QA Project Plan indicates a Method Detection Limit of 40 mg/kg. The laboratory reports a detection limit of 50 mg/kg. The difference is attributed to a different sub-lab being used.

(4) Table 13 of the QA Project Plan indicates field precision of +/- 50%. The laboratory results for SEDP1-1A, SEDP1DUP indicate precision of 67%.